

## General Electric

Model or Catalog No.	SD-35	S-44	S-67	S-85	S-107	S-146	S-182	P-44	PS-65	PS-63	P-83	P-110	P-134	P-170	P-180
<b>CABINET SPECIFICATIONS</b>															
Overall dimensions, including hardware															
Height (inches)	30	63 1/2	66 1/2	67 1/2	65 1/2	66 1/2	71 1/2	62 1/2	65 1/2	65 1/2	69 1/2	68 1/2	71 1/2	74 1/2	81 1/2
Width (inches)	42	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2
Depth (inches)	17 1/2	23 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2
Thickness of insulation															
Top of cabinet (inches)	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Sides of cabinet (inches)	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Bottom of cabinet (inches)	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Inside dimensions of cabinet liner															
Height (inches)	28 1/2	31 1/2	33 1/2	34 1/2	32 1/2	33 1/2	33 1/2	31 1/2	33 1/2	33 1/2	35 1/2	33 1/2	35 1/2	35 1/2	47 1/2
Width (inches)	19 1/2	18 1/2	22 1/2	27 1/2	28 1/2	28 1/2	47 1/2	18 1/2	22 1/2	22 1/2	26 1/2	35 1/2	40 1/2	53 1/2	55 1/2
Depth (inches)	12 1/2	14 1/2	16 1/2	18 1/2	17 1/2	18 1/2	18 1/2	14 1/2	16 1/2	16 1/2	19 1/2	19 1/2	18 1/2	17 1/2	20 1/2
Thickness of exterior metal (inches)	.0375	.044	.064	.054	.064	.064	.062	.044	.064	.050	.0375	.050	.050	.050	.050
Thickness of interior metal (inches)	.0375	.037	.044	.044	.060	.062	.062	.044	.050	.050	.0375	.050	.050	.050	.050
Number of refrigerator doors	1	1	1	1	2	2	2	1	1	1	2	2	2	2	4
<b>STORAGE CAPACITY</b>															
Gross food storage capacity (cu. ft.)	3.97	4.92	7.53	10.34	12.28	16.3	19.8	4.92	7.53	7.25	10.0	12.88	15.0	18.58	19.76
Net food storage (cu. ft.) (Nema rating)	3.5	4.4	6.7	8.5	10.65	14.6	18.2	4.4	6.7	6.3	8.3	11.0	13.4	17.0	18.0
Number of shelves	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5
Total shelf area (sq. ft.) (Nema rating)	7.3	8.0	11.6	16.0	20.0	25.2	30.4	8.0	11.6	11.3	15.4	20.4	22.1	26.7	26.6
Greatest distance between any two shelves	12 1/2	11 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	11 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2
Shortest distance between any two shelves	5 1/2	6 1/2	6 1/2	6 1/2	5 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	7 1/2	7 1/2	6 1/2
<b>ICE CUBE TRAYS</b>															
Number of ice cube trays	2	2	4	4	4	4	4	2	4	4	4	4	4	4	4
Inside dimensions of trays (inches)															
Length (at top of tray)	9 3/4	9 3/4	10 1/2	12 1/2	12 1/2	12 1/2	12 1/2	9 3/4	10 1/2	10 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2
Width (at top of tray)	3 3/4	3 3/4	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	3 3/4	4 1/2	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Depth	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Number of cubes produced at one freezing	40	40	84	104	104	104	104	40	84	84	104	104	104	104	104
Weight of ice cubes produced (lbs.)	3 3/4	3 3/4	9	12	12	12	12	3 3/4	9	9	12	12	12	12	12
<b>COMPRESSOR SPECIFICATIONS</b>															
Bore (inches)	1	1	1	1-1/32	1-1/32	1-1/32	1-1/32	1	1	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32	1-1/32
Stroke (inches)	0.55	0.55	0.7	1.0	1.0	1.0	1.0	0.55	0.7	0.7	1.0	1.0	1.0	1.0	1.0
Standard speed (rpm)	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740
Number of cylinders	1	1	1	1	1	1	1 or 2	1	1	1	1	1	1	1	1
Compressor capacity (lbs.) (80° room, 20° coil)	66	66	82	104	115	115	200	66	82	82	104	115	115	115	200
Motor size (hp.)	1-10	1-10	1-8	1-6	1-6	1-6	1-3	1-10	1-8	1-8	1-6	1-6	1-6	1-6	1-3
Standard motor speed (rpm)	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740
Quantity of refrigerant in system (lbs.)	3 3/4	3 3/4	5 1/2	4 1/2	5	5	8	3 3/4	5 1/2	5 1/2	4 1/2	5	5	5	8
Quantity of lubricant in system	1100 c.c.	1100 c.c.	1250 c.c.	3 pts.	3 1/2 pts.	3 1/2 pts.	7 pts.	1100 c.c.	1250 c.c.	1250 c.c.	3 pts.	3 1/2 pts.	3 1/2 pts.	3 1/2 pts.	7 pts.
<b>WEIGHT</b>															
Net weight of complete refrigerator (lbs.)	275	282	371	486	615	677	997	228	369	369	501	611	686	927	965
Total shipping weight (lbs.)	307	370	486	624	774	874	1333	400	474	474	610	787	878	1186	1202
<b>PRICE</b>															
F. o. b. factory price	\$180	167	235	335	440	540	695	187	255	235	355	415	515	605	705

## CABINET MATERIALS

Make of cabinet	General Electric
Material used for exterior	S models—one piece steel shell; all others—steel panels
Material used for frame	S models—no frame required; all others—wood
Material used for interior metal	Enameling stock
Finish of shelves	Special multi-plate
<b>INSULATION</b>	
Make of insulation	S models—Thermocraft; all others—Celotex, Insulite, or Dry-Zero
Nature of insulating material	Vegetable
Bulk or formed slabs	Formed slabs
How is insulation waterproofed	Waterproofed paper
Make of waterproofing material	Duplex Craft
<b>FINISH</b>	
Cabinet finish (exterior)	SD & S models—Sanak lacquer; all others—porcelain back & bottom
Make of exterior finish	General Electric
Colors offered as standard	White
Colors offered on special order	Any color
Cabinet finish (interior)	Acid resisting porcelain
<b>HARDWARE</b>	
Make of hardware	General Electric
Process of manufacture	Stamped
Basic metal of hardware	Brass
Finish of hardware	Chromium

## Mayflower

Model or Catalog No.	P-24	P-25	P-34	P-35	P-36	P-55	P-56	P-65	P-66	P-75	P-76	P-86	P-96
<b>CABINET SPECIFICATIONS</b>													
Overall dimensions, including hardware													
Height (inches)	51	57	51	57	60	52 1/2	52 1/2	55	55	59 1/2	59 1/2	61 1/2	65 1/2
Width (inches)	24 1/2	27	24 1/2	27	29 1/2	26	26	26 1/2	26 1/2	30 1/2	30 1/2	35 1/2	35 1/2
Depth (inches)	20 1/2	20	20 1/2	20	24	20	20	22 1/2	22 1/2	24 1/2	24 1/2	25	25
Thickness of insulation													
Top of cabinet (inches)	2	2 1/2	2	2 1/2	3 1/2	2 1/2	2 1/2	3	3	3 1/2	3 1/2	3 1/2	3 1/2
Sides of cabinet (inches)	2	2 1/2	2	2 1/2	3 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
Bottom of cabinet (inches)	2 1/2	3	2 1/2	3	4	3	3	3 1/2	3 1/2	4	4	4	4
Inside dimensions of cabinet liner													
Height (inches)	26	30 1/2	26	30 1/2	31 1/2	25 1/2	25 1/2	30 1/2	30 1/2	33 1/2	33 1/2	31 1/2	35 1/2
Width (inches)	19 1/2	21 1/2	19 1/2	21 1/2	21 1/2	19 1/2	19 1/2	19 1/2	19 1/2	22	22	26 1/2	26 1/2
Depth (inches)	15 1/2	14 1/2	15 1/2	14 1/2	14 1/2	15 1/2	15 1/2	16 1/2	16 1/2	17 1/2	17 1/2	18 1/2	18 1/2
Thickness of exterior metal (gauge)	20	20	20	20	20	18	18	18	18	18	18	18	18
Thickness of interior metal (gauge)	20	20	20	20	20	18	18	18	18	18	18	18	18
Number of refrigerator doors	1	1	1	1	1	1	1	1	1	1	1	2	2
<b>STORAGE CAPACITY</b>													
Gross food storage capacity (cu. ft.)	4.6	5.5	4.6	5.5	6.5	4.6	4.6	5.5	5.5	7.6	7.6	8.6	9.3
Net food storage (cu. ft.) (Nema rating)	4	5	4	5	6	4	4	5	5	6.6	6.6	7.5	8.5
Number of shelves	3	4	3	4	4	3	3	4	4	4	4	5	5
Total shelf area (sq. ft.) (Nema rating)	7.5	9.5	7.5	9.5	11.5	7.0	7.0	10.0	10.0	12.5	12.5	14.5	18.5
Greatest distance between any two shelves	12 1/2	13	12 1/2	13	13	12 1/2	12 1/2	13	13	15 1/2	15 1/2	17 1/2	17 1/2
Shortest distance between any two shelves	6 1/2	5 1/2	6 1/2	5 1/2	6	6 1/2	6 1/2	5 1/2	5 1/2	6 1/2	6 1/2	5 1/2	5 1/2
<b>ICE CUBE TRAYS</b>													
Number of ice cube trays	4	4	2	3	3	2	2	3	3	4	4	4	4
Inside dimensions of trays (inches)													
Length (at top of tray)	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4	9 3/4
Width (at top of tray)	3 3/4	3 3/4	5	5	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Depth	2 1/2	2 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Number of cubes produced at one freezing	84	84	56	84	84	56	56	84	84	112	112	112	112
Weight of ice cubes produced (lbs.)	6	6	4	6	6	4	4	6	6	8	8	8	8
<b>COMPRESSOR SPECIFICATIONS</b>													
Compressor capacity (lbs.) (ASRE rating)	80	80	90	90	90	90	90	90	90	125	125	140	140
Motor size (hp.)	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-5	1-5	1-4	1-4
Quantity of refrigerant in system (lbs.)	2	2	3 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	5	5	5	5 1/2
Quantity of lubricant in system	12 oz.	12 oz.	20 oz.	20 oz.	20 oz.	20 oz.	20 oz.	20 oz.	20 oz.	24 oz.	24 oz.	24 oz.	24 oz.
<b>WEIGHT</b>													
Total shipping weight (lbs.)	296	332	306	390	395	337	355	396	399	489	501	637	661



# ELECTRIC REFRIGERATION NEWS

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## BOHN PRESIDENT AWAITS RELEASE OF ABDUCTED SON

### Haskell Bohn Seized While Starting to Factory

ST. PAUL, July 5.—(Special to ELECTRIC REFRIGERATION NEWS)—Gebhard C. Bohn, president of the Bohn Refrigerator Co., and members of his family were gathered at the Bohn home here tonight in anticipation of the return of his son, Haskell Bohn, who was kidnapped as he was leaving his home for the Bohn factory on the morning of Friday, July 1.

William Bohn, uncle of the kidnapped youth, was absent on a "mysterious" mission. The family and police professed ignorance as to his whereabouts. The cancellation of a daily press conference earlier in the day gave rise to rumors that the kidnapped youth would be returned tonight.

The elder Bohn has conducted an unceasing search for his son, spending nights since the kidnapping driving the highways near the Twin Cities in response to directions left in notes reputed to have been from the abductors.

D. E. Meyers, family chauffeur, was the only witness to the kidnapping. A note was thrust into his hands by one of the two gunmen who forced the 20-year-old youth into the kidnap car.

The note was addressed to the elder Bohn. It gave him directions, demanded

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## COPELAND OPENS NEW OFFICES IN CHICAGO

By George F. Taubeneck

CHICAGO—Concurrently with the opening of its modern new showroom and offices at 540 N. LaSalle St., the Copeland factory branch here last week embarked upon two new enterprises, H. T. Kessler, president of the Copeland Refrigeration Co. of Chicago, conceived the ideas for both schemes, and is actively putting them into operation.

Idea No. 1 is the sale of home heating and cooling equipment, to help all Copeland dealers in the Chicago territory maintain a profitable all-year business. In addition to Copeland room coolers, these dealers may now sell Airtrol air conditioning equipment, the Chicago franchise for which having been obtained by Mr. Kessler.

Idea No. 2 is a special water cooler sale for the months of June and July, which the Chicago Copeland branch will depart from its customary policy, and do retail selling. Copeland water coolers will be offered for sale at \$100, delivered and installed in Chicago, during the sale.

To promote this water cooler sale a battery of telephones is being installed in the basement of the new Copeland quarters. Experienced telephone-and-follow-up salesmen will be hired to telephone prospects in the morning, and

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## MAJESTIC DISTRIBUTORS TO ATTEND SECTION MEETINGS

CHICAGO—Meetings for Majestic distributors in three sections of the country will be held on the next three week-ends by officials of the refrigeration division of Grigsby-Grunow Co.

The Edgewater Beach Hotel here will be the site of the Middle Western meeting Friday and Saturday of this week, July 15 and 16, Eastern distributors will meet at the Tremore Hotel, Atlantic City, N. J.; the following week-end, the delegation from the Far West will meet at Colorado Springs, Colo.

## STEWART-WARNER APPOINTS 2 NEW DISTRIBUTORS

CHICAGO—Two new distributors have been appointed by Stewart-Warner Corp., states C. W. Strawn, sales manager of the refrigeration division.

Baltimore Gas Light Co., 111 East Lombard St., Baltimore, will handle both Stewart-Warner refrigerators and radios in the Washington and Baltimore territories. E. W. Cowman is head of the utility company's radio sales department.

Nies' Hardware Co., 43 East 8th St., Holland, Mich., will handle Stewart-Warner refrigerators in that territory.

## Joins Taylor



JOHN J. TYNDAL  
Recently elected vice president of  
Taylor Freezer Corp.

## TRUKOLD BRINGS OUT ABSORPTION MACHINE

CHICAGO—Trukold oil-burning refrigerators are now being marketed by Montgomery Ward & Co.

Only one model, a 5 cu. ft. box, of this new absorption refrigerator is being offered for sale at the present time. It is listed in the Montgomery Ward catalog at \$107.50 plus freight. Montgomery Ward & Co. retail stores in Chicago are selling this model at \$115, delivered and installed in the home.

Ordinary kerosene is the fuel which supplies the energy to run this absorption unit. Ammonia is the refrigerant.

O. R. Perkins is manager of the department which is handling the sale of Trukold oil-burning refrigerators. At present only a few of the Montgomery Ward retail stores are stocked with this item.

Montgomery Ward & Co. also markets the Trukold electric refrigerator, three models of which are now on sale at \$139.50, \$169.50, and \$199.50, delivered and installed. All three models are guaranteed in writing for three years against all repairs, replacements or adjustment costs.

## L. M. PAYNE CHOSEN AGENT FOR ALFOL INSULATION

NEW YORK CITY—L. M. Payne of Detroit has just been appointed sales representative for Alfol aluminum foil insulation for electric refrigerators, according to Max Breitung, president of the Alfol Insulation Co., here. Mr. Payne maintains headquarters at the General Motors Building in Detroit.

## 6 MONTHS SALES OF NORGE CORP. NEAR '31 TOTAL

### June Is 18th Consecutive Month to Show Increase

DETROIT—Norge sales for the first six months of 1932 came within 6 per cent of equalling the total volume of sales in 1931, says Howard Blood, president of Norge Corp.

June is the 18th consecutive month to show a sales increase, reaching 127 per cent of the sales in June, 1931.

## Meetings End

DETROIT—John H. Knapp, vice president and director of sales, and J. H. Sterling, sales promotion manager, of the Norge Corp., will return this week-end from an extended trip during which they held distributor-dealer meetings in practically every principal city east of the Rocky Mountains.

Mr. Knapp led meetings in Boston; Providence, R. I.; Rochester, N. Y.; Syracuse, N. Y.; Buffalo; Cleveland; Pittsburgh; Chicago; Minneapolis; Milwaukee; Kansas City; and St. Louis.

Mr. Sterling's itinerary included the following cities: Cincinnati; Louisville, Ky.; Oklahoma City; Dallas, Tex.; San Antonio, Tex.; Houston, Tex.; New Orleans; Jacksonville, Fla.; Atlanta; Birmingham, Ala.; Memphis, Tenn.; Nashville, Tenn.; Waterloo, Iowa; Omaha; Hastings, Neb.

R. E. Densmore, Norge western sales manager, assisted Mr. Sterling, while M. G. O'Hara, Norge eastern sales manager, worked with Mr. Knapp. A. R. MacMillan, in charge of sales development, aided in the Buffalo, Cleveland, and Columbus, Ohio, meetings.

## STUDNER NAMES OUTLETS TO HANDLE JEWETT UNITS

NEW YORK CITY—Nine distributors of the Jewett electric refrigerator have just been announced by Myron Studner of Studner Bros., national merchandising organization for the Jewett machine.

The outlets include B. & O. Radio, Inc., Newark; Zweiffer, Inc., Harrisburg, Pa.; United Home Owners, Inc., Buffalo; Kellogg Mfg. Co., Rochester, N. Y.; Allied Electric Supply Co., Pittsburgh; Interstate Sales Co., Milwaukee; Milhender Electric Supply Co., Boston; Specialties Distributing Co., Detroit; and the Incandescent Supply Co., San Francisco.

The Jewett refrigerator is in active production at the Buffalo plant.

## Good Trader



W. J. POWELL  
Winning salesman in Westinghouse  
"Trading Post Drive."

## WESTERNER VICTOR IN 'TRADING POST DRIVE'

MANSFIELD, Ohio—W. I. Powell of the Westinghouse Electric Supply Co. of San Francisco is the winner of the "Trading Post Drive," a contest sponsored by the Westinghouse Electric & Mfg. Co.

Powell swung into first place early in the contest, lost his position, then finished strong to win over several hundred salesmen who were out after the prizes.

R. E. Buxton, The Elin Co., Philadelphia, took second place in the race, while Emmet Massey, Fones Bros. Hardware, Little Rock, Ark., finished in third place.

The "Trading Post Drive" was conducted in a manner similar to the old time trading methods in the Northwest. When the salesmen reached certain objectives, or closed certain deals they were awarded a number of "pelts." The salesman who had the greatest number of pelts won the grand prize, while those others who finished well towards the top were awarded other prizes.

## COPELAND LEADS BALL LEAGUE AFTER NO-HIT GAME

MT. CLEMENS, Mich.—Pitching a no-hit game against the King Finance Co. here last Friday, Quincey Schnauffer of the Copeland service department moved the company baseball team of Copeland Products, Inc., up into first place in the Mt. Clemens Industrial League. None of the opposing players got to first base in Friday's game.

## WESTINGHOUSE TO OPEN 'LUCKY 7' CONTEST JULY 7

### Salesmen, Supervisors to Vie for Prizes in Summer Drive

MANSFIELD, Ohio—At seven minutes past 7 a. m. on the seventh day of the seventh month (July), all Westinghouse refrigerator salesmen and their supervisors will embark upon the "Lucky 7" contest, which will continue until August 27, and in which those competing will have the opportunity to win for themselves special merchandise prizes on every refrigerator which they sell, and also added special prizes.

The contest will take the form of a trip to the seven wonders of the world. Special mailings of interest to all who register in the contest will be made July 16, July 23, July 30, August 6, August 13, August 20, and Aug. 27, each one of these mailings designating a "stop" at one of the seven wonders of the world, and marking a milestone in the contest's progress.

Scoring will be on the basis of "leagues," every sale marking so many leagues on the journey to the seven wonders. A varying schedule of leagues has been established according to refrigerator models.

It will take approximately 14 sales during the seven weeks to complete the trip, and a special prize awaits the first salesman to finish.

In addition to the regular merchandise prizes—a whole catalog full of them

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## 10 LINES DISPLAYED AT FURNITURE SHOW

By George F. Taubeneck

CHICAGO, July 5.—Ten different makes of electric refrigerators are being shown to visiting furniture dealers from all parts of the nation at the annual trade show of the National Retail Furniture Association, which opened here today at the Furniture Mart building on Lake Shore Drive.

Models on display include those of Gibson, Stewart-Warner, Buckeye, Cavalier, King Kold, Freeze King, Surecold, Dayton, Sanitary, and Niagara.

Domestic Industries, Inc., manufacturer of Buckeye electric refrigerators, is introducing its new "Richland" line at this show. These models have the units in the bottom, instead of on the top, as in the case of the Buckeye.

Models 100 and 200, both 4.4 gross cu. ft. capacity (no net cubage is quoted) are on display. Model 200 has a better quality cabinet than its stablemate; otherwise the two models seem identical. No list prices will be established on the "Richland" line.

Beginning the first of this month, Buckeye refrigerators will be sold only through distributors, according to Domestic Industries representatives. The

(Concluded on Page 2, Column 3)

## STANDARD GAS BRINGS OUT LINE OF 5 STEEL CABINETS

NEW YORK CITY—Five models of a new all-steel cabinet have just been introduced to the refrigeration trade by the Standard Gas Equipment Corp., gas range manufacturer with offices here. They are already in production in the factory at Jersey City, N. J.

Refrigerator cabinet sales are in charge of Harry Diamond, operating under the direct supervision of J. F. Donovan, general sales manager for the company, while refrigeration advertising is being handled by T. S. Kennedy, assistant advertising manager.

The entire line is insulated with Dry-Zero, hardware is chromium plated, and all models have the compressor-chamber.

(Concluded on Page 2, Column 4)

## KELVINATOR SERVICE HEAD UNDERGOES OPERATION

DETROIT—E. A. Seibert, head of the Kelvinator Corp. service department, was operated on for appendicitis on the morning of Friday, July 1. Members of the service department who have visited Mr. Seibert since the time of the operation report that he is on the road to recovery and expect him to return to his duties in about two weeks time.

## 'With the Compliments of Westinghouse, Folks'



Westinghouse dealers are offering water bottles as an inducement for a showroom visit. It's part of the Midsummer Thrift campaign, which includes extended sales promotion plans and a salesman's contest.



## COPELAND OPENS NEW OFFICES IN CHICAGO

(Concluded from Page 1, Column 1)  
follow them up in the afternoon and night.

Vocational lists of Chicago business and industrial houses will be taken from the Chicago classified telephone directory, and will be divided up among the special salesmen put on this job. These salesmen will be paid \$2 a day, plus commissions on every water cooler they sell.

Airtrol equipment to be sold by the Copeland branch in Chicago will control heat and humidity winter and summer, according to Mr. Kessler. It can be installed so as to make use of the home owner's present hot water or steam heating system.

Airtrol coils and fans radiate the heat provided by circulating hot water or steam in winter; while in summer they radiate the cold provided by circulating water cooled by a Copeland compressor in the basement of the home. Radiators may be taken out.

One of these Airtrol air conditioning systems has been installed in the new Chicago home of Copeland. Mr. Kessler's private office, however, is cooled by a Copeland room cooler.

The new Copeland offices and showroom occupy a single building on LaSalle St. north of the bridge over the Chicago river. The entire front length (ground floor level) of the building is occupied by a display of Copeland refrigerators. Green dominates the color scheme. Two curving stairways in the middle lead up to the offices.

Service and installation departments of the Copeland branch are located here, and deliveries are made directly from the south side of the building.

## 10,000 PEOPLE SEE BUREAU SHOW IN HARRISBURG, PA.

HARRISBURG, Pa.—More than 10,000 persons attended the first annual refrigeration show of the Electric Refrigeration Bureau of Harrisburg, held from June 11 to June 18.

As a special attraction, Miss Kathryn Pitts, home economist, presented daily demonstrations that included preparation of unusual refrigerator delicacies.

Electric refrigerator representatives participating in the exhibition are convinced that the success of this year's show more than warrants a continuation of the activity in the future.

Electric refrigerators represented in the show were as follows: General Electric, Coldspot, Gibson, Mayflower, Servel, Copeland, Dayton, Kelvinator, Mohawk, Stewart-Warner, Crosley, Frigidaire, Majestic, Norge and Westinghouse.

## BEAUTY SALON PURCHASES FRIGIDAIRE CONDITIONERS

PORTLAND, Ore.—An order for \$5,000 worth of Frigidaire air conditioning equipment to be used in the candy-making room and Beauty Salon of Meier & Frank, large department store here, has been sold by A. J. Dawson and D. W. Drucker of the Refrigeration Engineering Corp., commercial Frigidaire dealer here.

The equipment included two S-3 cube type coolers for the candy-making room, cooled by an FW-6200 compressor, and 7 FW-6300 compressors and 14 No. 116 cooling coils to be installed in an air duct system for the Beauty Salon.

## Bohn Seeks Return Of Abducted Son

(Concluded from Page 1, Column 1)  
\$35,000, advised him not to communicate with authorities and ended with this sinister warning—

"If you want to see your son alive don't tell the police. Remember what happened in the Lindbergh case."

Police were notified, however, and an unceasing search resulted—unceasing until Sunday when police withdrew "to leave all avenues open." William Bohn announced he had a telephoned conversation with an emissary of the abductors and elicited an agreement to release Haskell for \$5,000. Nothing came of it.

Ted Newberry, former Capone gangster, was picked up at a Chicago airport when he arrived from Minneapolis, but was later released after questioning.

So polished was the language of the note and so implicit were the instructions that police were disinclined to believe the kidnapping to be the work of gangsters. The note mentioned the license number of one of the Bohn automobiles and referred to a "club bag" in the house. The elder Bohn was instructed to put the money in the bag and to drive in the car designated to a destination to be revealed at a later date. The family was unable to explain how anyone could have been so familiar with the Bohn household furnishings.

## OPERATING EXPENSES FOR N.E.L.A. CONVENTION LOW

NEW YORK CITY—That operating expenses of the N.E.L.A. in connection with the 1932 Exhibition at the Atlantic City, N. J., convention were kept well below the income from the sale of space was reported by the exhibition committee of the N.E.L.A. after a recent meeting.

A rebate of 36 per cent of the cost of space was made to the exhibitors, in accordance with the policy of the committee in returning to exhibitors the difference between operating expenses and the income from the sale of space.

Officers of the committee were re-elected as follows: chairman, E. W. Goldschmidt; vice chairman, George A. Hughes; secretary-treasurer, Frank H. Gale.

## 5,000 ATTEND OPENING OF CROSLLEY DEPARTMENT

HAMILTON, Ohio—Edward Humber, head of the Humber Electric Appliance Store, 350 High St., estimated that approximately 5,000 visited his retail store location during the formal opening of his Crosley electric refrigerator department.

The attraction was a group of broadcasting artists from the studios of station WLW in Cincinnati. The Morin Sisters, harmony trio; McCormick's Old-time Fiddlers Band; Herschel Luecke, pianist; and Pat Harrington, tenor and master of ceremonies—all broadcasted from an improvised studio in a second-story display window in full view of the crowds in the street via a public address system.

This new dealer reports seven Crosley electric refrigerator sales during the week preceding the formal opening of his refrigerator department.

## 10 LINES DISPLAYED AT FURNITURE SHOW

(Concluded from Page 1, Column 5)  
new "Richland" line, however, may be purchased direct from the factory (assembled in Dayton) by retail outlets.

P. W. McClay, district representative, Murray Bernard, Chicago representative, and V. V. Dawson, new Chicago distributor, are meeting all visitors at the Buckeye exhibit. William Switzer, president, and T. V. Goodman, new general sales manager, are expected to arrive before the end of the week.

The Gibson Electric Refrigerator Corp. of Greenville, Mich., has its full line of refrigerators on display, including two black and one chromium plated models. The company also has on exhibition a cutaway unit. In charge of this group of models are H. Carman Thompson, Gibson publicity director, and H. M. Pauley, service manager.

The Stewart-Warner Corp. of Chicago is offering for inspection a full line of its electric refrigerators. H. F. Dardell, factory representative, and C. W. Strawn are in charge of this display.

A 6.04 cu. ft. Cavalier model selling for \$172.00, or for \$155.00 when three or more are sold together, is exhibited by the Tennessee Furniture Corp., Chattanooga, Tenn., and is shown to all interested visitors by F. D. Carey, Floyd Helms, Wyatt French, and K. H. Burner.

The Illinois Moulding Co., having the largest display in the entire exhibition, is showing a full line of King Kold and LaSalle refrigerators, with both the top and bottom style of unit location represented. E. E. Galt, sales manager and secretary, is in charge of the display.

Four models—those having four, five, six, and eight cu. ft. net capacity—are being displayed by the Dayton Refrigeration Corp., together with two Niagara models manufactured by Heinz and Munschauer of Buffalo. Directing the exhibition of the first of these two groups are W. H. Dennison, vice president in charge of sales for the Dayton company, and Roger Patten, sales representative of the same firm.

Four electric refrigerators are displayed by the Freeze King Refrigerator Corp. of Chicago. One, with a net capacity of 4.85 cu. ft., sells for \$99.50. Another, having a 6.9 cu. ft. net capacity, is offered for \$198.00, while a third, with a 6.2 net capacity, sells for \$164.00.

The firm is also displaying a model priced at \$79.50, which has a 3.6 cu. ft. net capacity. In addition to these refrigerators, Freeze King is exhibiting a \$99.50 water cooler. Directing the Freeze King display are James G. Brown, vice president in charge of sales; A. J. Marks, eastern division sales manager; George Beier, Chicago sales manager; and John Murphy of the Chicago sales department.

Six models are being shown at the exhibition by the Sanitary Refrigeration Corp. of Fond du Lac, Wis. Two of the models have green bodies and buff doors. B. K. Miller and W. C. Henning are demonstrating the units.

Delegates to the exhibition are also inspecting the Surecold display of refrigerators, manufactured by the Warner Steel Products Co., Ottawa, Kan. The models are being shown at the Knickerbocker hotel. Vice President Gershon is directing this display.

Four manufacturers of ice boxes are displaying their models. They are: the Ranney Refrigerator Co. of Greenville, Mich., with its IceCo boxes; the Rhinelander Refrigerator Co., Rhinelander, Wis.; the Tennessee Furniture Co. of Chattanooga, Tenn., making Cavalier boxes; and the Sanitary Refrigeration Corp. of Fond du Lac, Wis.

## INSTALLMENT BUYERS GOOD RISKS, G. E. HOTPOINT SAYS

CHICAGO—That the average wage earner who purchases electric appliances on the installment plan is a good financial risk, was stated in the semi-annual report of Edison General Electric Appliance Co., Inc.

"By far the greatest number of General Electric Hotpoint ranges sold to individual purchasers during the first six months of 1932 were sold on the easy payment plan," the report says. "We find that payments were made regularly, on time, and that few ranges sold on this plan are ever repossessed."

"An analysis of our sales indicates that many people who formerly purchased for cash, now are taking advantage of the installment plan of buying, and sales reports show more and more home owners are budgeting their household expenditures."

## MOTT & DAWSON TO SELL COMMONWEALTH LINE

CHICAGO—The firm of Mott & Dawson, formerly Norge distributor here, has been appointed distributor for Commonwealth electric refrigerators in the Chicago area, according to V. V. Dawson of that concern.

Commonwealth refrigerators are made by Domestic Industries, Inc., and are sold elsewhere in the United States under the trademark, "Buckeye."

## Cabinets Are Built By Standard Gas

(Concluded from Page 1, Column 5)  
ber below the food compartment. Breaker strips are of Bakelite. Exterior finishes are of either lacquer or porcelain, while all interior liners are of porcelain.

Three models comprise the de luxe line of cabinets, which is featured by beveled corners and liners of acid-resistant porcelain. Model No. 450 in this series has 4 cu. ft. of storage capacity, and measures 24½ in. wide, 20½ in. deep, and 51½ in. high.

Model 550 is rated at 4.8 cu. ft. of food storage capacity, and stands 53 in. high, 20½ in. deep, and 26 in. wide. Model 650 has 5.7 cu. ft. of storage capacity, and measures 26 in. wide, 21½ in. deep, and 58 in. high. All models in this series have 6-in. legs. Insulation is 3 in. of Dry-Zero.

The standard line consists of two models. Type 422 is 24½ in. wide, 20½ in. deep, and 51½ in. high, and offers 4 cu. ft. of capacity. It is insulated with 2 in. of Dry-Zero. Model 522 has 5 cu. ft. of capacity, is 26½ in. wide, 20½ in. deep, and 53½ in. high, and has 2½ in. of Dry-Zero throughout. Model 422 has 5-in. legs, while 522 has 6-in. legs.

## LADLEY CO. OPENS NEW PORTLAND HEADQUARTERS

PORTLAND, Ore.—New headquarters have just been occupied at 185 Fifth St. by The Ladley Co., distributor for General Electric refrigerators and Hotpoint ranges here.

All functions of the distributorship, including general offices, a new model G-E kitchen, and showrooms, are consolidated in the new headquarters.

The new kitchen is part of the Ladley Co. Home Economics Service, which is directed by Miss Louise Leslie.

S. S. Brundage, retail sales manager, is in charge of the new store.

## WESTINGHOUSE OPENS 'LUCKY 7' CONTEST

(Concluded from Page 1, Column 5)  
ranging from Westinghouse refrigerators and other Westinghouse appliances to clothing and even pedigreed dogs—from which any salesman who has any leagues to his credit may make a selection, each Westinghouse district refrigerator supervisor will award "Mystery Chest" prizes to the high and second high men in his own territory.

All salesmen must register with the "Tour Headquarters" at Mansfield to be eligible for prizes. Salesmen will report their sales on the regular Westinghouse "Quota Buster" report forms. Supervisors need not report as their names are reported by their salesmen, and credit is given them automatically.

Credit will be given only on installed units. Report forms postmarked after 7 a. m. on July 7, and before 7 p. m. on August 27, will be honored. Orders for prizes postmarked later than Sept. 15, 1932, will not be honored.

R. C. Cosgrove, recently appointed head of the Westinghouse refrigerator division, will be "Tour Director." The contest will tie in with the "Midsummer Thrift Plan," a special July and August sales drive on Westinghouse refrigerators, for which special sales promotional ideas and advertising copy have been prepared.

## EXPERIMENTS SHOW USE OF COTTON IN INSULATION

NEW YORK CITY—Experiments in the production of insulating material consisting in part of low-grade cotton or "linters" have brought about the suggestion of an important new use for cotton, states the New Uses Section of the Cotton-Textile Institute.

Insulating board using cotton in this manner, has been manufactured by Ralph Grayson, Atlanta, and is now being tried out in containers for the shipment of solid carbon dioxide and other products needing insulation in transit.

## BUSH FINNED TUBING INDIVIDUAL SQUARE FINS



With modern equipment for quantity production and 22 years experience in the manufacture of finned tubing we are ready to meet the various requirements of the refrigeration industry for condensers or other fabricated forms of finned tubing.

THE BUSH MFG. CO., HARTFORD, CONN.

## Ansul Sulphur Dioxide UNIFORM ALWAYS For direct charging

Pure, bone dry. Every container analyzed. A perfect product guaranteed.

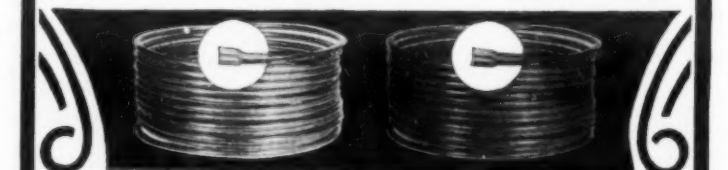


Nine sizes of cylinders from 2 to 150 pounds. Also ton drums. Stocks in principle cities.

ANSUL CHEMICAL COMPANY MARINETTE - WISCONSIN



## WOLVERINE Seamless Dehydrated Tubing



Copper-Plain or Tin Plated-Solder Sealed

This highly specialized product is the standard of the industry. Saves time. Saves labor. Saves service cost. Immediate shipments from large stock.

Eastern Sales Office  
420 Lexington Ave., New York  
Los Angeles Office  
1015 East 16th St.  
26 Sales Offices



Wolverine Tube Co.  
1491 Central Ave.  
Detroit  
Export Dept.—H. M. Robins Co., Detroit.

**The MULLINS**  
SHEET METAL  
EVAPORATOR

Sanitary  
Compact  
Efficient

White  
Porcelain  
Enamel

DESIGNS FOR USE WITH HIGH SIDE AND LOW SIDE FLOATS — IMPROVED FAST FREEZING SHELF AT SLIGHTLY INCREASED COST.

Manufacturers: Write for Details!

**MULLINS MANUFACTURING CORPORATION**  
REFRIGERATION DIVISION  
SALEM, OHIO



## JAMERSON MANAGES FRIGIDAIRE DISTRICT

DAYTON—H. C. Jamerson, former household sales manager of Frigidaire Corp., has been made district sales manager on the Pacific Coast, with headquarters in Los Angeles.

Mr. Jamerson was at one time general sales manager for the New York distributorship.

C. C. Lee, former manager of the St. Paul branch, has been transferred to the new Frigidaire Sales Corp., Oakland, Calif. H. L. Harbison, former manager of the Denver branch, is now with the new Frigidaire Sales Corp., Portland, Ore.

Besides the three new branches headed by Jamerson, Lee, and Harbison, five others have been established fairly recently.

D. M. House is manager of Frigidaire Sales Corp., 188 N. Front St., Douglas Public Warehouse, New Orleans; H. H. Kennedy is manager of Frigidaire Sales Corp., 1371 Euclid Ave., Cleveland; J. H. Voorhees is manager of Frigidaire Sales Corp., 972 Union Ave., Memphis, Tenn.; P. K. Abry heads Frigidaire Sales Corp., 1600 Grand Ave., Kansas City, Mo., and T. J. McIntire is manager of the Frigidaire Sales Corp., 164 S. Fourth West St., Salt Lake City.

The Kansas City branch replaces the distributorship formerly called the R. E. Parsons Electric Co. In Salt Lake City, the branch replaces the former Electric Light & Refrigeration Co., headed by C. N. Malouf. In Memphis, the new branch replaces the former W. P. Galloway Co.

New Frigidaire distributors appointed within the last few months are: Consumers Power Co., H. H. Davis, Mgr., 212 Michigan Ave. W., Jackson, Mich.; Jensen-Byrd Co., Alvin L. Jensen, secretary, 320 Riverside St., Spokane, Wash.; Ohio Edison Co., George Longwell, refrigeration manager, Akron, Ohio.

## OHIO DISTRIBUTOR CHANGES CORPORATE NAME OF FIRM

COLUMBUS, Ohio—The firm name of the American Radio Distributing Co., Westinghouse refrigerator distributor here, has been changed to the American Sales Co. as of June 1, according to T. E. Goldenberg, sales promotion manager.

The change was made because of the fact that the company no longer handles radios, but is in the refrigeration business exclusively, distributing Westinghouse refrigerators through 30 Ohio counties and the city of Columbus.

A. Goldenberg, president and founder of the company, entered the electrical business in Zanesville, Ohio, 25 years ago, under the name of American Incandescent Light Co.

## DETROIT HOME ECONOMISTS VISIT KELVINATOR PLANT

DETROIT—Members of the Detroit Home Economics Association toured the Kelvinator plant recently and were guests of Kelvinator Corp. at luncheon.

Home economics teachers in public schools, students, hospital dietitians, etc., comprised the group of 63 women making the inspection trip.

Vance C. Woodcox, Kelvinator advertising director and sales promotion manager, addressed the groups, and the factory sound moving picture was shown.

## Westinghouse Sales Branch Conducts Operations From Independently-Owned Stores

By Phil B. Redeker

DETROIT—A metropolitan-area selling operation on refrigerators in which a factory branch conducts retail selling work through independently owned stores is being carried out in Detroit by the Westinghouse Electric Supply Co.

P. E. Rinehart, manager of the local refrigeration division, and William Howlett, sales promotion manager of the Detroit refrigeration division, have been here for the last six months whipping the plan into an effective operation.

When the Dalrymple Co., former Westinghouse distributor, closed up at the end of 1931, the Westinghouse refrigeration heads felt the need for putting a sales organization into the Detroit metropolitan area that would be doing a live retail business right from the start of the 1932 selling season.

The two men whom they sent to Detroit, after studying various types of outlets and methods of selling, devised a "selective selling" campaign. Six central marketing localities were selected as sites for "spot" locations; the leading furniture store in each of these centers was selected as the headquarters for Westinghouse operations in that locale.

The Westinghouse branch hires and trains the salesmen, does all the servicing, and handles the financing. The furniture store supplies the space—and also

## Keeps Up to Quota Despite Illness

COLUMBUS, Wis.—The story of a dealer who sold refrigerators in spite of the fact that he was confined to a hospital bed with a severe attack of rheumatism is that of Alex Ledrowski, dealer here for E. H. Schaefer Co., distributor of General Electric refrigerators in Milwaukee.

Ledrowski had won the title of Major General by his activities in the General Electric refrigeration department's Monitor Top war campaign, but was in danger of losing the title to another dealer unless he sold at least two refrigerators the week he was taken ill.

He did it. A telephone installed at his bedside enabled him to close two sales and have the machines delivered within the time allotted.

## EDISON HOTPOINT HOLDS RANGE 'RED CIRCLE WEEK'

CHICAGO—"Red Circle Week" was observed recently by the Edison General Electric Appliance Co., Inc., maker of the General Electric Hotpoint range.

A special drive on Hotpoint range sales, with special national advertising, was carried out. The *Saturday Evening Post* for June 25 carried a double-page advertisement announcing "Three Beautiful New Hotpoint Ranges," said to be the first time that an electric range manufacturer has announced a new range or series of ranges through national advertising.

In preparation for the sales drive, Hotpoint officials had toured the country for eight weeks, holding meetings in the field with distributors and dealers to educate them on Hotpoint range merchandising. G.E. Circle radio programs during the week were tied in with Red Circle Week.

Distributors and dealers held cooking schools. Some held "Believe It Or Not" demonstrations, working on the ideas: "You Can Bake with Ice on Your Oven," "You Can Cook Ten Pounds of Potatoes with Half a Cup of Water," "Chocolate Pudding, Fricassee Chicken and Potatoes Can All Be Cooked in One Utensil on the General Electric Hotpoint Range Without Mingling of Flavor or Odors."

Special sales portfolios, window banners and decorations, and other dealer helps were designed for use during the campaign.

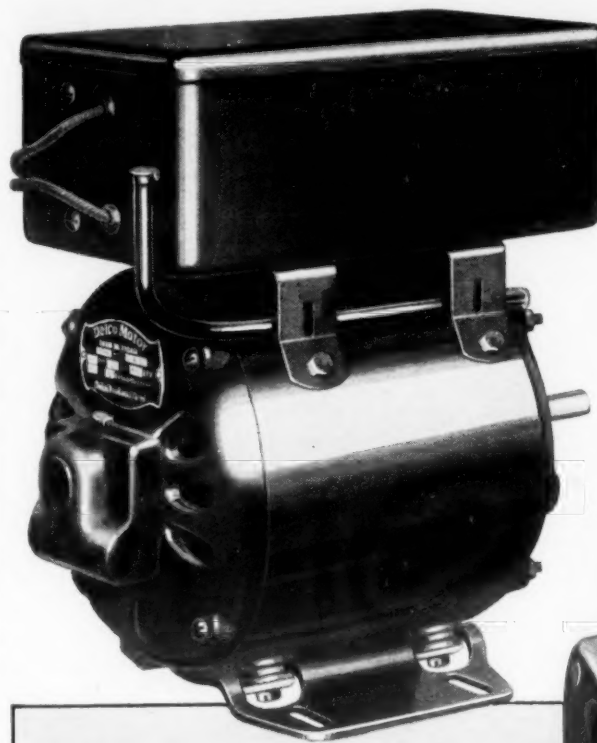
## PUBLIC UTILITY SELLS 785 KELVINATORS IN DRIVE

CHARLOTTE, N. C.—A total of 785 Kelvinators was sold in the spring campaign of North Carolina Public Service Co., according to John P. Lucas, vice president of the utility company. This total did not approach that of the 1931 campaign, but did exceed that in 1930.

Prizes awarded to leading salesmen on the basis of points for each unit sale plus additional points for each \$10 value list, were as follows:

R. H. Watkins of Charlotte won the first prize of \$100 in the first division; H. V. Martin, Burlington, N. C., won first prize of \$75 in division 2; and H. L. Hance, Lancaster, S. C., won first prize of \$25 in division 3.

Charlotte and Greenville, S. C., led in total sales.



# A REFRIGERATOR MOTOR MUST NOT FAIL

"TAKE down your ice card, plug in this electric refrigerator, and your ice box worries are over." That's the salesman's promise when he is selling electric refrigerators. And the unit must make good—the motor must not fail. Even though repair service may be close at hand, an overnight interruption in refrigerator operation may mean an upset household, and serious damage to your reputation. The majority of leading refrigerator makers insure against motor failure by installing Delco motors. Delcos were developed expressly for refrigeration service. They are giving satisfaction in millions of electric refrigerators in use today.

**DELCO PRODUCTS CORPORATION**  
DAYTON, OHIO



## WRIGHT FIELD BUYS 9 AIR CONDITIONERS

DAYTON—Complete Frigidaire air conditioning equipment will be installed in the statistical division at Wright Field, the United States Army Air Corps experimental base, according to D. B. Brown, Frigidaire salesman.

The equipment will be installed chiefly to reduce humidity in the rooms in order that the operation of delicate tabulating machines will be protected. Humidity curls cards in which holes have been punched relating to the operation of engines and planes of the entire air corps, Brown said.

Seven of the Frigidaire units installed will be used for heating as well as cooling; the other two will be used for cooling only.

The Green Mill restaurant, owned by Nicholas G. Floridis, has also been equipped with six Frigidaire air conditioning units, and the fact is being used by Floridis in advertising carried by Dayton newspapers.

Two units and a compressor have been installed in the private office of the president of the Crystal Tissue Co., Middletown, Ohio.

## GRAB THIS OPPORTUNITY

Qualified Distributors  
Wanted Quick for New  
Low Priced Air Washer  
and Cooler



Distributors and dealers everywhere can get the cream of the new demand for air conditioning with Klenzair.

Low priced room-size unit. Washes, purifies, deodorizes and cools a thousand cubic feet of air in ten minutes. Drives the air through four screens of water.

Klenzair is portable. Weighs only 22 pounds. Stands 40 inches high. Easily and dramatically demonstrated. Practically sells itself.

Retails for \$35.00  
Western Price \$37.50

Year 'round sales. Great campaign possibilities.

Good merchandising helps, including window display material, sales literature, mats and cuts for local newspaper advertising.

Big domestic market as well as commercial possibilities. Sell Klenzair to:

Doctors Florists  
Dentists Grocers  
Undertakers Druggists  
Barbers Dry Cleaners  
Beauticians Bakers  
Photographers

Wonderful for sick rooms, hotel rooms, club rooms, bank vaults, chemical laboratories.

Write for liberal discounts and merchandising plans to

THE SWARTZBAUGH  
MFG. CO.

Toledo : Ohio  
Manufacturers of the well known  
Everhot Electric Cooker

## Nema Distribution By States for May, 1932

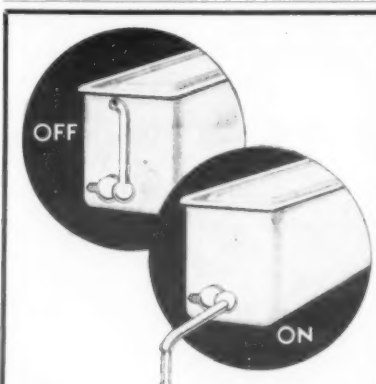
INCLUDING EXPORTS  
States and Territories

	House- hold Low Sides	Commer- cial Low Sides
Connecticut .....	2,734	31
Maine .....	796	3
Massachusetts .....	4,941	30
New Hampshire .....	500	...
Rhode Island .....	783	...
Vermont .....	344	...
<b>New England Total .....</b>	<b>10,098</b>	<b>64</b>
Delaware .....	302	15
Maryland .....	3,397	17
New Jersey .....	5,881	16
New York (state) .....	22,181	135
Pennsylvania .....	11,389	144
<b>Eastern Total .....</b>	<b>43,150</b>	<b>317</b>
Kentucky .....	1,228	10
Ohio .....	6,600	56
West Virginia .....	1,461	10
<b>East Central Total .....</b>	<b>9,289</b>	<b>76</b>
Alabama .....	866	11
Florida .....	988	7
Georgia .....	1,426	47
North Carolina .....	958	4
South Carolina .....	443	...
Tennessee .....	984	14
Virginia .....	2,176	13
<b>Southeastern Total .....</b>	<b>7,841</b>	<b>96</b>
Illinois .....	8,500	137
Indiana .....	2,389	23
Michigan .....	4,288	106
Wisconsin .....	1,424	27
<b>Great Lakes Total .....</b>	<b>16,601</b>	<b>293</b>
Minnesota .....	2,057	52
North Dakota .....	241	...
South Dakota .....	241	...
<b>North Central Total .....</b>	<b>2,539</b>	<b>52</b>
Iowa .....	1,605	34
Kansas .....	967	4
Missouri .....	3,322	76
Nebraska .....	1,020	1
<b>Middle West Total .....</b>	<b>6,914</b>	<b>115</b>
Arizona .....	183	...
California .....	4,131	118
Nevada .....	85	...
<b>Pacific Coast Total .....</b>	<b>4,399</b>	<b>118</b>
Idaho .....	279	...
Montana .....	284	...
Oregon .....	735	...
Utah .....	536	1
Washington .....	990	...
<b>Northwestern Total .....</b>	<b>2,824</b>	<b>1</b>
Colorado .....	1,008	1
New Mexico .....	142	...
Wyoming .....	127	...
<b>Rocky Mountain Total .....</b>	<b>1,277</b>	<b>1</b>
Arkansas .....	341	...
Louisiana .....	418	102
Mississippi .....	226	6
Oklahoma .....	1,099	2
Texas .....	2,597	44
<b>Southwestern Total .....</b>	<b>4,681</b>	<b>154</b>
<b>Total United States .....</b>	<b>109,613</b>	<b>1,287</b>
Total Canada .....	2,899	...
Other Foreign (including U. S. Possessions) .....	2,836	36
<b>Total for World .....</b>	<b>*115,348</b>	<b>*1,323</b>

\*All companies reported on Household Low Sides and the total agrees with Line 65. \*This total is less than 10% of the total on Line 82, therefore this report is not complete enough to be accurate on commercial low sides by states.

## REX COLE WILL DISTRIBUTE G. E. DISHWASHERS

NEW YORK CITY—Rex Cole, Inc., has added General Electric dishwashers to the products which his organization now distributes in the metropolitan area.



MR. DISTRIBUTOR:

... you get a  
better discount on the  
COLD RINK

Before you stock any line of water coolers write for Hamburg Bros.' proposition on Coldrink... the best discounts in the business and a low retail price. See the new seamless model which fits all electric refrigerators. White enamel with rounded corners, chromium finish, fast flowing faucet. Can never rust. Cash in on this fast selling specialty now.

HAMBURG BROS.  
963 Liberty Ave., Pittsburgh, Pa.

## Nema Sales of Household Systems and Cabinets for May 1932, Reported By Sizes and Price Classes

Reported by Refrigeration Division of National Electrical Manufacturers Association. Member companies: Copeland, Frigidaire, General Electric, Kelvinator, Majestic, Norge, Servel, Trupar, Universal Cooler and Westinghouse.

### Household Cabinets With Systems

Using Factory or Branch Invoice Net Prices to Distributors and Dealers, Including Export.

	MAY, 1932 Sales—As Billed to Distributors and Dealers		Stocks at End of May, 1932	
	Quantity	Dollars	Quantity	Dollars
<b>Lowest Priced Cabinets</b> Net Food Space				
1. Under 4.00 cu. ft. ....	3,969	222,542.54	654	40,539.75
2. 4 to 4.99 cu. ft. ....	17,369	1,174,757.73	6,719	464,580.98
3. 5 to 5.99 cu. ft. ....	11,015	941,247.41	3,386	275,655.79
4. 6 to 6.99 cu. ft. ....	2,741	258,277.41	4,057	370,480.00
5. 7 to 7.99 cu. ft. ....	6,794	771,378.81	11,181	1,361,229.79
6. 8 to 9.99 cu. ft. ....	15	3,018.96	3	761.00
7. 10 to 12.99 cu. ft. ....	181	34,245.44	187	35,870.32
8. 13 to 16.99 cu. ft. ....	147	36,090.00	364	89,359.00
9. 17 to 24.00 cu. ft. ....	...	...	...	...
<b>11. Totals if Systems Included .....</b>	<b>42,231</b>	<b>3,441,558.25</b>	<b>26,551</b>	<b>2,638,476.63</b>
<b>Medium Priced Cabinets</b>				
21. Under 4.00 cu. ft. ....	1,161	96,484.71	4,018	336,535.55
22. 4 to 4.99 cu. ft. ....	16,344	1,544,563.77	55,309	5,174,789.75
23. 5 to 5.99 cu. ft. ....	6,401	663,716.70	4,015	416,315.69
24. 6 to 6.99 cu. ft. ....	17,954	2,307,847.64	41,259	5,638,459.94
25. 7 to 7.99 cu. ft. ....	1,902	275,258.67	382	57,560.00
26. 8 to 9.99 cu. ft. ....	1,943	344,128.88	9,122	1,616,518.00
27. 10 to 12.99 cu. ft. ....	532	119,574.22	6,299	1,484,980.75
28. 13 to 16.99 cu. ft. ....	81	23,810.23	2,825	837,235.00
29. 17 to 24.00 cu. ft. ....	90	32,080.00	1,738	637,312.00
<b>31. Totals if Systems Included .....</b>	<b>46,408</b>	<b>5,407,464.82</b>	<b>124,987</b>	<b>16,199,706.58</b>
<b>Highest Priced Cabinets</b>				
41. Under 4.00 cu. ft. ....	1,333	167,541.00	2,732	332,265.00
42. 4 to 4.99 cu. ft. ....	1,083	135,982.00	1,577	212,530.00
43. 5 to 5.99 cu. ft. ....	...	...	...	...
44. 6 to 6.99 cu. ft. ....	811	112,076.57	432	65,146.00
45. 7 to 7.99 cu. ft. ....	95	15,660.00	126	28,163.00
46. 8 to 9.99 cu. ft. ....	71	12,070.00	64	8,088.00
47. 10 to 12.99 cu. ft. ....	...	...	14	5,390.00
48. 13 to 16.99 cu. ft. ....	1	640.00	13	6,188.00
49. 17 to 24.00 cu. ft. ....	...	...	1	585.00
<b>51. Totals if Systems Included .....</b>	<b>3,394</b>	<b>443,969.57</b>	<b>4,959</b>	<b>658,355.00</b>

### Household Cabinets Without Systems

Using Factory or Branch Invoice Net Prices to Distributors and Dealers, Including Export.

	MAY, 1932 Sales—As Billed to Distributors and Dealers		Stocks at End of May, 1932	
	Quantity	Dollars	Quantity	Dollars
<b>Lowest Priced Cabinets</b> Net Food Space				
1. Under 4.00 cu. ft. ....	48	758.00	276	6,097.00
2. 4 to 4.99 cu. ft. ....	6,483	100,826.00	2,507	42,071.00
3. 5 to 5.99 cu. ft. ....	4,189	104,730.00	1,857	47,087.80
4. 6 to 6.99 cu. ft. ....	3,424	114,088.00	795	26,299.00
5. 7 to 7.99 cu. ft. ....	1,190	46,101.00	470	18,290.00
6. 8 to 9.99 cu. ft. ....	...	...	1	85.00
7. 10 to 12.99 cu. ft. ....	...	...	33	3,320.00
8. 13 to 16.99 cu. ft. ....	...	...	...	...
9. 17 to 24.00 cu. ft. ....	52	7,956.00	370	56,556.00
<b>10. Totals if Cabinets only .....</b>	<b>15,386</b>	<b>374,459.00</b>	<b>6,309</b>	<b>199,805.80</b>
<b>Medium Priced Cabinets</b>				
21. Under 4.00 cu. ft. ....	26	851.00	57	1,784.00
22. 4 to 4.99 cu. ft. ....	379	14,980.00	2,579	101,084.00
23. 5 to 5.99 cu. ft. ....	1,251	62,416.00	5,895	294,099.40
24. 6 to 6.99 cu. ft. ....	523	30,932.00	877	52,223.00
25. 7 to 7.99 cu. ft. ....	1,138	70,579.00	1,718	106,550.00
26. 8 to 9.99 cu. ft. ....	350	24,089.00	362	24,711.00
27. 10 to 12.99 cu. ft. ....	9	1,066.00	46	5,448.00
28. 13 to 16.99 cu. ft. ....	...	...	...	...
29. 17 to 24.00 cu. ft. ....	4	707.00	2	353.00
<b>30. Totals if Cabinets only .....</b>	<b>3,680</b>	<b>205,620.00</b>	<b>11,536</b>	<b>586,252.40</b>
<b>Highest Priced Cabinets</b>				
41. Under 4.00 cu. ft. ....	...	...	...	...
42. 4 to 4.99 cu. ft. ....	...	...	...	...
43. 5 to 5.99 cu. ft. ....	...	...	...	...
44. 6 to 6.99 cu. ft. ....	157	10,483.00	5,316	193,059.00
45. 7 to 7.99 cu. ft. ....	...	...	...	...
46. 8 to 9.99 cu. ft. ....	65	5,394.00	80	6,639.00
47. 10 to 12.99 cu. ft. ....	57	6,571.00	744	71,957.00
48. 13 to 16.99 cu. ft. ....	30	4,238.00	29	4,097.00
49. 17 to 24.00 cu. ft. ....	22	4,132.00	97	19,222.00
<b>50. Totals if Cabinets only .....</b>	<b>331</b>	<b>30,818.00</b>	<b>6,266</b>	<b>294,974.00</b>

## Analysis of Nema Sales and Stocks—May, 1932

Reported by Refrigeration Division of National Electrical Manufacturers Association. Member companies: Copeland, Frigidaire, General Electric, Kelvinator, Majestic, Norge, Servel, Trupar, Universal Cooler and Westinghouse.

Using Factory or Branch Invoice Net Prices to Distributors and Dealers, Including Export.

	MAY, 1932 Sales—As Billed to Distributors and Dealers		Stocks at End of May, 1932	
	Quantity	Dollars	Quantity	Dollars
<b>HOUSEHOLD</b>				
61. Total (cabinets only) .....	19,397	610,897.00	24,111	1,081,032.20
62. Total (systems included) .....	92,033	9,292,992.60	156,477	19,496,538.21
63. Separate Household Systems .....	19,852	1,234,298.50	14,584	1,181,793.00
64. Separate Household Low Sides .....	3,463	62,950.45	6,926	160,443.00
<b>65. Total Items 62, 63 and 64 .....</b>	<b>115,348</b>	<b>1,277,967.55</b>	<b>177,967</b>	<b>2,443,769.21</b>
66. High Sides, 1/4-hp. and Less .....	2,086	119,323.80	3,137	181,818.50
67. Parts and Miscellaneous (household) .....	...	56,710.23	...	39,000.00
<b>68. Total of 61, 62, 63, 64, 66 and 67 .....</b>	<b>117,772.58</b>	<b>1,394,748.53</b>	<b>221,404.91</b>	<b>2,662,587.71</b>
<b>COMMERCIAL</b>				
71. Water Coolers with High Sides .....	1,156	142,997.17	15,941	2,052,832.60
72. Water Coolers with No High Sides .....	219	12,354.00	754	41,638.00
73. Ice Cream Cabinets with High Sides .....	2,864	452,070.00	2,532	543,524.00
74. Ice Cream Cabinets with No High Sides .....	2,226	276,295.00	4,969	607,087.00
75. Milk Coolers with No High Sides .....	7	915.00	2	363.00
76. Room Coolers with No High Sides .....	152	15,990.00	2,478	259,640.00
77. Counters and Commercial Boxes .....	82	31,389.00	1,331	379,960.00
78. ... ..	...	...	...	...
79. Extra Low Sides (commercial) .....	7,442	292,085.49	21,803	879,895.32
80. Extra High Sides 1-3 hp. and Up .....	8,853	1,058,408.65	15,901	2,053,049.16
81. Parts and Miscellaneous (commercial) .....	...	46,254.82	...	146,453.28
<b>82. Total 71 to 76 inclusive and 79 .....</b>	<b>14,066</b>	<b>1,398,749.04</b>	<b>49,479</b>	<b>6,082,337.36</b>
<b>83. Total Items 65 and 82 .....</b>	<b>129,414</b>	<b>1,398,749.04</b>	<b>227,466</b>	<b>3,175,926.57</b>
<b>84. Total Commercial (71 to 81 inclusive) .....</b>	<b>13,705,331.71</b>	<b>13,705,331.71</b>	<b>29,314,394.27</b>	<b>29,314,394.27</b>

Line 85 prorated to correspond with total sales of 10 companies  
No. of manufacturers reporting on Line 85 and their % of total sales: 9 manufacturers—96.74% 6 manufacturers—67.22%  
\*Shows number of manufacturers reporting on items above line 85 in these double columns; also the % of total sales for the month made by these companies.



## ST. LOUIS BUREAU PLANS ARE EXPLAINED

By Phil B. Redeker

ST. LOUIS—When Chairman Charles Michel of the St. Louis Electric Refrigeration Bureau was rewarded the trophy at the N.E.L.A. meeting in Atlantic City offered by the National Bureau in the "Half Century" contest, in recognition of his having conducted the outstanding local bureau of the year, he undoubtedly felt proud of and grateful for the hundreds of meter readers working in St. Louis.

For back of the story of the success of the St. Louis bureau, much of which is due to its activity this spring, is a story of a utility employee campaign for all merchandising outlets for refrigeration in which the meter reader was the kingpin.

### Deliver Invitations

The plan consisted of having the meter reader leave a mysterious looking envelope marked "important" at each home he visited, the envelope containing an invitation to the housewife to register in a contest that might result in her obtaining a refrigerator free of charge.

"The plan was designed to do two things of direct benefit to the dealer and the distributor, which they couldn't themselves accomplish on a wholesale scale," stated Arthur E. Schanuel, director of the St. Louis Bureau, in explaining the plan.

"First, because it required registration at some dealer-member's store, it brought prospects to the dealer's very doorstep. Second, because salesmen were the messengers that brought additional information concerning the contest, it opened the doors of many homes to salesmen."

### 'Teaser' Campaign

Schanuel believes that the success of this campaign has made possible the showing of the bureau so far this year, its sales from Jan. 1, 1932, to May 1, 1932, showing that nearly 60 per cent of its quota for the year has been achieved in this period.

A radio campaign was tied in as a "teaser" factor in connection with this drive. Immediately following the hourly time announcements given by the leading stations came the word "to watch for the meter man bearing the mysterious message."

Dealers were provided with posters and signs, a characteristic "ice cube" man used in all publicity concerning the contest being used to identify the store where registration for the contest might be made.

A direct mail campaign, consisting of personalized invitations to register in the campaign, was made available to dealers.

Salesmen found it easier to gain an interview by questioning the housewife about the "meter man's message" upon contact.

### Handbills, Doorhangers

Many dealers used handbills and doorhangers to abet the work of the meter men and publicity efforts.

A special telephone solicitation campaign was worked out by the bureau, to tie in with the general plan of the drive.

Total distribution of the messages numbered 289,000.

Better than one out of every 10 housewives receiving these messages, called as a result, at a dealer's store. Total number registering was 29,154.

One out of every three women, or 9,621, who visited refrigeration dealers' stores received a demonstration of the refrigerator while in that store.

Of the 9,621, more than 5,800 were considered live prospects by the dealers.

The average distributor thus had, through his dealers, 2,650 visitors to stores, 875 demonstrations, and 527 really good prospects. The average distributor having a major operation (through dealers) had 4,654 visitors to stores, 1,536 demonstrations, and 926 new prospects.

The average outlying dealer had 171 visitors to the stores, 53 demonstrations, and 32 new prospects as a result of the campaign.

## PACIFIC COAST WINNER IN VISUALIZER TEST NAMED

SACRAMENTO, Calif.—The title of most proficient salesman in telling the General Electric refrigeration story on the West Coast has been conferred on Don McBride, retail salesman for the L. H. Bennett Co., General Electric distributor in northern California.

McBride is winner of the western district audition in the current sales presentation contest, and will represent the West Coast at the finals of the contest in Cleveland.

Twice a member of the General Electric Toppers Club, McBride has won a number of contests and consistently maintained a high sales record, according to Russell Grosjean, sales promotion and advertising manager of L. H. Bennett Co.

## How Bureau Plan Brought Prospects To Showrooms



A great share of the credit for the success of the St. Louis Electric Refrigeration Bureau (winner of the National Bureau's 'Half Century' contest award) goes to a utility employee campaign. Meter readers left special invitations in all homes inviting prospects to showrooms, with results like those shown above.

## SIX AIR CONDITIONERS ARE INSTALLED IN NEW ENGLAND

BOSTON—Six recent air conditioning unit sales are reported by Frigidaire Sales Corp. of New England. Two of these are for homes, two for offices, and two for mortuaries.

The home of the former Gov. Alvan T. Fuller's mother, at Rye, N. H., is being completely air conditioned. Gov. Fuller ordered the installation to insure the comfort of his mother throughout the hot months.

The private office of Leavitt L. Edgar of the Boston Edison Co. has been equipped with a Frigidaire unit concealed behind a grille.

Winchell Smith, novelist, has equipped the living room and sleeping chamber of his home at Mill Streams, Farmington, Conn., with air conditioning units.

W. J. Davidson, president of the Atlantic & Pacific Tea Co., with offices in Dorchester, Mass., has equipped his private office and that of his secretary. The installation was a rush job, the incentive being a period of very hot weather.

Two large mortuary installations are also reported by the Frigidaire organization, those of Hay & Peabody, Portland, Me., and Sessions', Worcester. Both are adaptations of the duct type of air circulation in which Frigidaire equipment has been used.

## G. E. DISTRIBUTOR CHANGES NAME TO MONTGOMERY, INC.

RICHMOND, Va.—A change in corporate name from Commonwealth Refrigeration Co., Inc., to R. S. Montgomery, Inc., has been made by the General Electric refrigerator and Hotpoint range distributor for Virginia, with headquarters here.

The name was changed, according to company officials, because of the addition of ranges to the line. R. S. Montgomery is president and R. E. Bentley secretary of the firm.

Raymond C. Hall, sales promotion manager, has moved to Norfolk to take charge of the Norfolk division, including the branch and territory served from that point.

H. C. Owen is in charge of all retail operations in this city. He has had charge of range retail business for the last several months. Fred H. Swaffin will continue as manager of the range division.

## NORGE DISTRIBUTOR USES 'THEN AND NOW' DISPLAY

ST. LOUIS—The "then and now" of household refrigeration is being shown on the sales floor of Norge Co. of Missouri with a 45-year-old Alaska ice refrigerator, and a modern Norge electric refrigerator, standing side by side.

Permission to use the display during their refrigeration week has been granted a St. Louis department store by Norge Co. of Missouri, according to H. H. Walker, sales manager.

Claim is made that the old Alaska box was the second ever built by the Alaska Refrigerator Co., but Mr. Walker stated that he had no evidence to substantiate that claim.

## DEPARTMENT STORE SELLS 101 FRIGIDAIRE IN WEEK

TAMPA, Fla.—Maas Bros. department store, 40-year-old establishment in this city, has just opened a refrigeration department handling Frigidaire equipment on the Meter-Ice plan.

Joe Waterman is the manager of the new department, which during the first week installed 101 Frigidaires.

## Coon Beautifier

WATERBURY, Conn.—This is a coon story.

Arthur B. Comstock, dealer for Modern Home Utilities, Inc., General Electric distributor, at Winsted, Conn., has two pet coons.

During the summer months, he says, he places the raccoons in a General Electric refrigerator a few hours each day, and thus increases the beauty and quality of the fur.

## GIBSON REFRIGERATOR IS USED FOR CEMENT TESTS

KANSAS CITY, Mo.—An order for a Gibson electric refrigerator from the Highway Commission of the State of Kansas last week caused a salesman of Townley Metal and Hardware Co., Gibson distributor, to inquire what use the commission had for the unit.

It was found that the highway commissioner was using the box in which to test cement, since he needed a humidity of 90 per cent.

# A new sales opportunity in the field of Air Conditioning

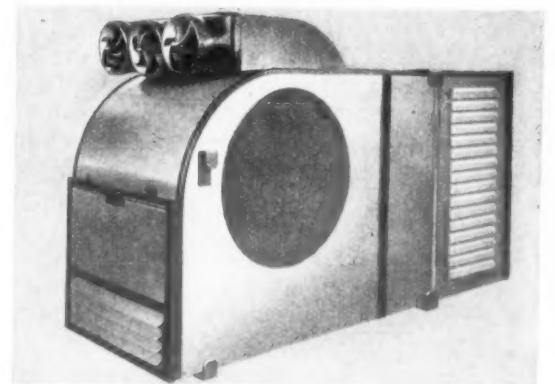
AIR conditioning is a market not limited by climate or season. It is a year 'round market. It has been ripe and ready for cultivation—waiting for just one thing: That is, equipment low enough in cost to bring the advantages of air conditioning to every business and home, no matter how small.

Airtrol is the product that the air conditioning field has needed—a compact unit that provides all the essentials of complete air conditioning. Summer cooling and de-humidification are produced by running refrigerated water through the Airtrol coil, over which all air passes.

Airtrol is easy to sell because it offers to the business men who are your customers an opportunity for profit. It is easy to install because it is small, compact and self-contained.

It is priced to sell at a comfortable margin of profit for you. It is being made in production quantities now. It has proved itself in successful installations, and has proved its sales value in many ways.

Sales material to help you sell Airtrol in volume and at a profit has been prepared. Write for details of this material and for details of the unusual construction and efficiency of this new air conditioning apparatus that is designed to fit your facilities for sales and installation. J. H. McCormick & Co. Works: Williamsport, Pa. General Sales Office: Chrysler Bldg., at 42nd St. and Lexington Ave., New York. Canadian Sales Representative: A. H. Simpson, 28 Scott St., Toronto, Canada.



AIRTROL MODEL B, CABINET TYPE

Illustrated is one size of one model—the "cabinet" type Airtrol. Airtrol is made in types and sizes to suit every need, from the private home to the large industrial plant; for retail stores and business places of any size or type; restaurants, auditoriums, schools; any place where people gather; beauty parlors and barber shops; offices and kitchens or other rooms in homes. They are inexpensive enough so that the smallest business house or office can now afford the added comfort and profit to be found in pure air, properly humidified and circulated at a comfortable temperature, winter and summer. Airtrol can be quickly, easily, inexpensively installed. Write for any additional information desired.

# A I R T R O L

J. H. MCCORMICK & COMPANY, Williamsport, Pa.



## ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

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### Editorial Aims of the News

- To encourage the development of the art.
- To promote ethical practices in the business.
- To foster friendly relations throughout the industry.
- To provide a clearing house for new methods and ideas.
- To broadcast the technical, commercial and personal news of the field.

### Sales Promotion Activity Comes Into Its Own

WITH competition becoming keener every day, factory sales organizations of the refrigeration manufacturers which are accounting for the major share of the sales volume on domestic refrigerators are driving forward in their operations with renewed zeal in an effort to bring a maximum of efficiency to their work.

Among the most highly intensified of all operations is that of the sales promotion department. As competition increases both in volume and in quality, and as field selling organizations appeal for help in the form of new ideas, new sales fodder, the turnover on sales promotion ideas and material must necessarily become more rapid, and superiors grow more critical.

There are a number of reasons for the current demand of intensified activity on the part of the sales promotion department. In the first place, the present-day market is one which is making imperative the use of "sales promotion ideas" to focus the attention of the public on a particular make of refrigeration, and the use of "sales helps" placed in the hands of salesmen who go out to sell a refrigerator to an individual prospect.

### A 'Buyer's Market' Prevails

It is a "buyer's market," as contrasted with a "seller's market," and the prospect is shopping around, driving bargains.

"There are no 'easy sales' any more," lamented a large Middle Western distributor recently. "There is no business falling into the laps of our salesmen to act as a builder of salesman morale."

In a "seller's market," the specialty salesman got by with a minimum of effort. He didn't have to be especially well versed in his product, or particularly coherent or factual in his sales presentation to nail down a sufficient portion of the "easy business" that came his way in order to make a pretty fair living.

But with the easy business gone, he has found all his customers to be of the "hard buying" type, which he once disregarded because it was simpler to go after the cream market. Confronted with the problem of centering the prospect's attention on one refrigerator out of the many competing for his approval, and encountered by hard-bitten sales resistance and requests for factual information on the construction and performance of his job, the salesman has turned to the factory for help. The sales promotion department has been given the job of putting the proper tools in his hand.

### Need for New Strategy

The sales promotion department is the "eyes and ears" of the selling organization. Selling strategy that was good a year ago has gone by the

boards. An entirely new technique has sprung up this year. The head of a factory branch which has had a markedly successful operation thus far this year gives a major share of the credit for this success to the application of new methods of selling, new sales promotion technique.

Sales promotion departments have been asked to do the seemingly impossible—that of bringing about a more efficient sales promotional operation on curtailed budgets. In instances where this has been actually accomplished, full credit must be given to the personnel involved.

### Testing the Idea

One of the ways in which sales promotion managers have put added effectiveness into their operations while at the same time eliminating a good deal of wasted money and effort has been through the testing of material before it is put into the field.

In some instances, the method used by the American Tobacco Co. in testing its "Lucky Strike" advertising has been followed. Under this plan, the new idea or "stunt" is tried out in a limited area, and a factory corps makes accurate observations on the actual results of the effort expended. If the results are termed successful, the presentation is prepared in bulk and sent out to the field.

In instances where the program did not warrant such exhaustive tests, sales promotion managers have been known to impose upon their friends for weeks at a time in testing out certain "appeals" or promotional literature.

One of the most important and at the same time, one of the costliest functions of the sales promotion department is the creation and activation of direct mail campaigns. Because it is both costly and important, much work has recently been given over to a study of the proper use and effectiveness of direct mail, with the result that a great deal of time and money has been saved.

### Making Use of the Findings

If a new sales promotional idea proves successful on test, it gives the manager an answer to the distributor or dealer who has been having a hard time of it, and who hasn't made use of his selling tools in a proper manner.

A primary function of the sales promotion department which is perhaps universal among the established refrigeration manufacturers rests in the preparation of a "salesman's manual," or "salesman's presentation helps."

Tests made by two leading refrigeration manufacturers have demonstrated that a canvasser carrying no sales kit is almost a total loss if forced into an interview. On the other hand, the same tests reveal that if the sales paraphernalia is too obvious, the canvasser's chance of getting by the door-sill is considerably lessened.

This study points to the fact that the sales promotion manager must not only have first-hand knowledge of what constitutes adequate sales presentation at the moment (it is significant that these sales manuals today present the story of a particular refrigerator almost exclusively, where not much more than a year ago a good share of the space was devoted to selling the idea of refrigeration), but that he must also know the psychology behind the personal presentation of such sales helps as he may have devised.

### Selling an Ideal to Salesmen

Even when a sales promotion manager knows that he has tested material at hand, and is comparatively sure that he is familiar with the proper method of presenting it, he has but half finished his task. He must sell the retailer and the salesman in the field on the idea of using this material, and using it correctly.

Present-day market conditions have put a real job in the hands of the sales promotion manager. He must be planner, writer, psychologist, experimenter, artist, salesman, and preacher. He must be turning over dozens of ideas in his mind, while completing detailed work on projects which have taken material form.

It is the type of work that calls for an imaginative, hard-driving, quick-thinking, quick-acting type of individual. Of significance, perhaps, is the fact that the majority of sales promotion managers are comparatively young executives, and the few who can really boast a respectable number of years are invariably youthful in appearance, sprightly in mien, and as active as a sophomore aspirant for a football team.

## Letters from Readers

### Let There Be Light! "And There Was Light," Declares George Brown

Electric Refrigeration Bureau  
 420 Lexington Ave.  
 New York City  
 June 17, 1932.

Editor:

I wish that I had read the June 8 issue of the News when it was delivered to our booth in the Auditorium at Atlantic City, N. J., because then I would have been able to have discussed with you in person your article on the N.E.L.A. convention.

Your second paragraph is the thing which I dislike very much because it is not the truth. As a matter of fact, N.E.L.A. rented the Auditorium and complete lighting service went with it. When the exhibit was opened by President Owens on Sunday noon, June 5, all the lights in the Auditorium were turned on full brilliancy and remained that way during the hours that the exhibit hall was open until its close on Friday noon. During the period of setting up the exhibits, four or five big groups of flood lights served to illuminate the hall.

Your article I suppose was written on Saturday or Sunday morning, in which event you might have made inquiry as to what the illumination would be during the exhibit. If you were there on Sunday noon, you saw what happened to the lights and even though your article had been prepared and forwarded to Detroit, it was not too late to correct this misstatement. I appreciate the fact that it is too late now to do anything about it, but that paragraph hit me just wrong and I had to tell you about it.

We were glad to see that you were able to use Mr. J. E. Davidson's complete speech. This is being printed in folder form and will be circulated to the utility and manufacturing companies. Did you get your set of photographs which I left at the booth for you? They came out very well I think and possibly you will be able to use some of them in future issues of the News.

The next time you are in New York City, please make it a point to drop in to see me.

G. N. BROWN,  
 Refrigeration manager.

### No Kidding, George?

June 25, 1932.

Mr. G. N. Brown  
 Refrigeration Manager  
 Electric Refrigeration Bureau  
 New York City

The writer arrived in Atlantic City, N. J., on the morning of Monday, June 6, and went directly to the Auditorium. After searching assiduously for an electric refrigerator in the dimly lit Auditorium on that day, I undoubtedly strained my eyes badly, and probably missed a light bulb here and there when I telegraphed my story that evening back to Detroit, where the presses were waiting for it.

You wouldn't kid me about those lights, would you, George? How was the beach that day?

Editor.

### Price Too Low For One Company

Henry Weis Mfg. Co., Inc.  
 Elkhart, Ind.  
 June 11, 1932.

Editor:

In response to yours of June 10, requesting details concerning our product as pertaining to the manufacture of equipment used in refrigeration industry, please be advised that after checking up this field and learning the ridiculously low prices at which the units are being furnished, we decided to not enter this field of manufacture.

We appreciate your interest and are sorry that our findings have been such that we are not in a position to enter this field.

T. W. CLARK,  
 Secretary treasurer.  
 May 4, 1932.

### Want a Good Dealer?

June 24, 1932.

Editor:

It may interest you to know that we have gone into business in Elgin, Ill., under the firm name of Collin & Spalding. We have taken over the Maytag Shop and sales organization and are contemplating doing a general home appliance business.

The first line that we intend putting in, in addition to washing machines, is electric refrigerators, and we are now investigating several lines. No decision has been reached and if you have a channel through which you advise manufacturers of new concerns contemplating the handling of refrigerators, we shall appreciate your passing the word along.

Both Mr. Spalding and myself have had considerable merchandising experience, Mr. Spalding for years having been connected in an executive capacity

city with the Illinois Watch Case Co., while the writer was, prior to the time that the Norge took over the Alaska Refrigerator Co., vice president in charge of sales of the Alaska Refrigerator Co.

J. L. COLLIN.

### 'Valve' Interesting

Electric Products Co., Inc.  
 June 23, 1932.

Editor:

It might interest you to know that I find your page in the News most interesting and always look forward to receiving my copy.

L. H. HOLMAN,  
 Sales manager.

### Kind Words From Foreign Lands

H. M. Robins Co.  
 120 Madison Ave., Detroit  
 June 20, 1932.

Publisher:

I quote herewith part of a letter received from Mr. H. A. Dunlap, our Copeland representative in India:

"I would like to say that I have been reading with very great interest the copies of ELECTRIC REFRIGERATION NEWS and am becoming more and more convinced of the importance of this line. These issues have served to help familiarize me with this new field and (much as I dislike the word) to 'inspire' me. As you know, I am not the typical, high-power American salesman, but I have become very sincerely interested in this business, see the good possibilities for it here and find that I am giving it more and more of my attention."

Thought you would be interested in the reference.

H. M. ROBINS,  
 President.

Kali Besar West 2  
 Batavia, Java

May 4, 1932.

Editor:

This country is a potential market for electrical refrigerators, imports at present being handicapped by the relatively high cost for electricity, the lack of efficient and adequate servicing people, and the rather high price for the units themselves—considering the fact that these days people have no idea when they will be sent back to Europe or America, being obliged to take a loss on their refrigerators which are usually sold at public auction for but a fraction of the original cost.

With improved economic conditions in the consuming markets, Netherland India will buy refrigerators and in sizeable amounts. American exporters would do well to get their connections made now even though no appreciable initial business is involved.

CARL H. BOEHRINGER,  
 Assistant trade commissioner.

Sao Paulo, Brazil.  
 April 15, 1932.

Publisher:

Our first copies of ELECTRIC REFRIGERATION NEWS came in a few weeks ago and they could not have been better timed for one of them contained just the information we needed concerning F-12, a new Frigidaire refrigerant in connection with the customs clearance of which the Frigidaire office here had requested our help.

We look forward to the regular receipt of this magazine in the future and are sure that it will prove helpful.

DAVID S. GREEN,  
 Trade commissioner.

Legation of the  
 United States of America  
 Stockholm, Sweden

April 20, 1932.

Publisher:

I want to tell you how much we have enjoyed ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS. They are being made available to Swedish business men who are interested in electric refrigeration, and I am sure that we will continue to find them very useful.

BASIL D. DAHL,  
 Trade commissioner in charge.

Accra, British West Africa

April 21, 1932.

Publisher:

We are looking forward to receiving ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS.

We will see to it that they are given a very prominent display on the reading rack in the library of this office.

ELMER H. BOURGIERE,  
 Assistant trade commissioner.

Helsingfors, Finland  
 April 2, 1932.

Publisher:

I am very much interested in ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS.

While both Swedish (Electrolux) and American (Frigidaire) refrigerators are sold in this market, it is believed that when economic conditions improve there will be an increased demand for all kinds of refrigeration equipment.

FREDERICK C. SOMMER,  
 Acting commercial attaché.



# 470 Pages of Facts, Figures and Names to Help You in Your Business



Just a few of the 470 pages  
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"The exact information we have been wanting to know" say users of the 1932 Refrigeration Directory and Market Data Book. This valuable volume is a "right hand man" for manufacturers, distributors, dealers and salesmen and everyone supplying the refrigeration industry with parts, materials or services.

If you have not ordered your copy, do so right away and get the advantage of this complete guide. Following are some of the contents:

## Complete List of Manufacturers of Refrigeration Equipment, Parts, Materials and Supplies--

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- 3—Classified Section.

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- 4—Geographical Section.

The first complete list of refrigeration manufacturers in convenient geographical arrangement with names of executive officers.

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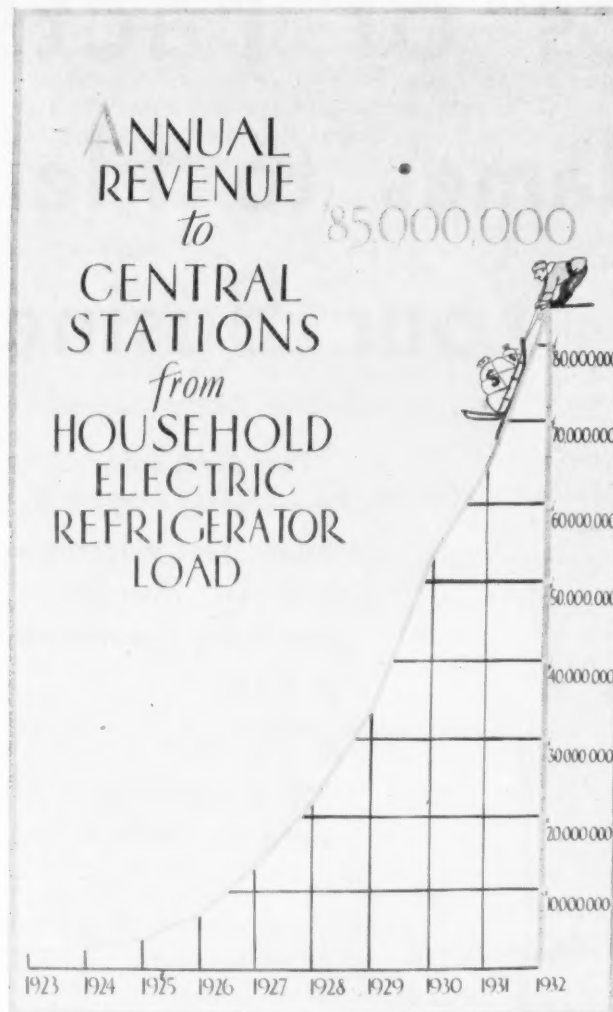
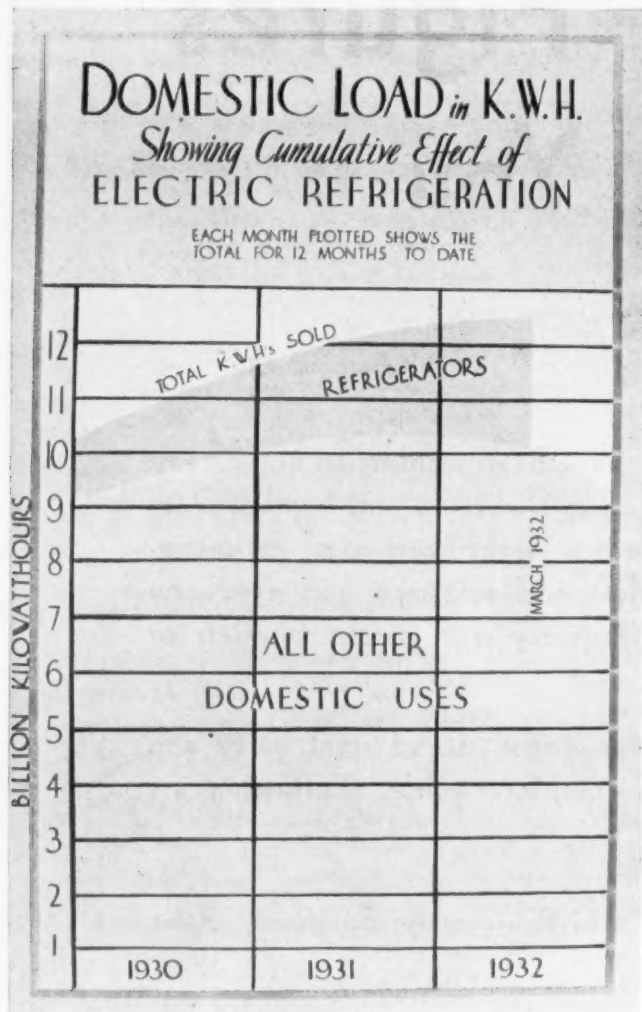
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# Bureau Charts Show Value of Refrigeration Load



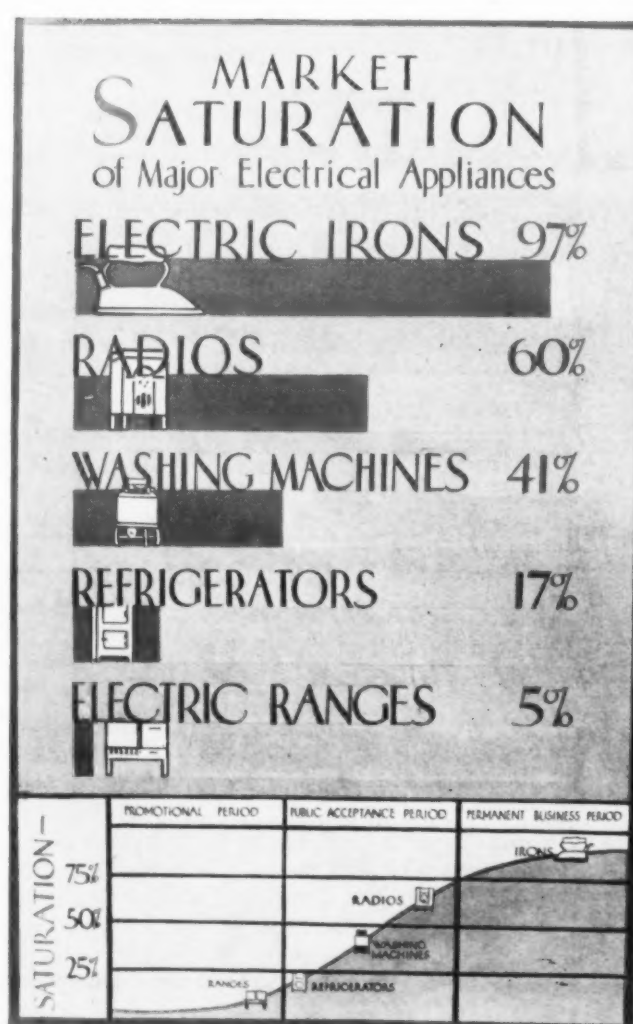
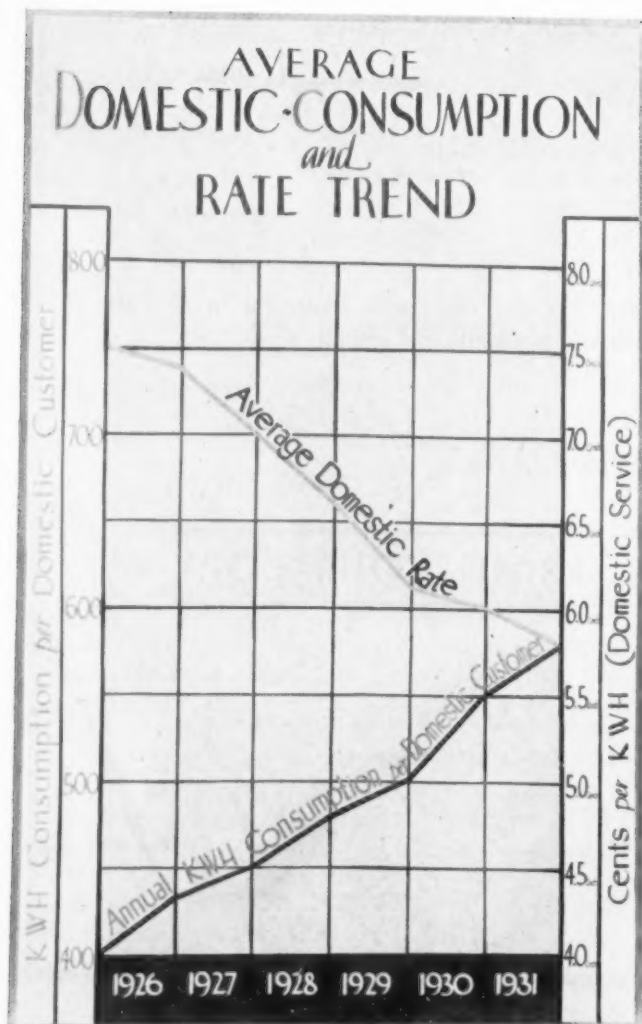
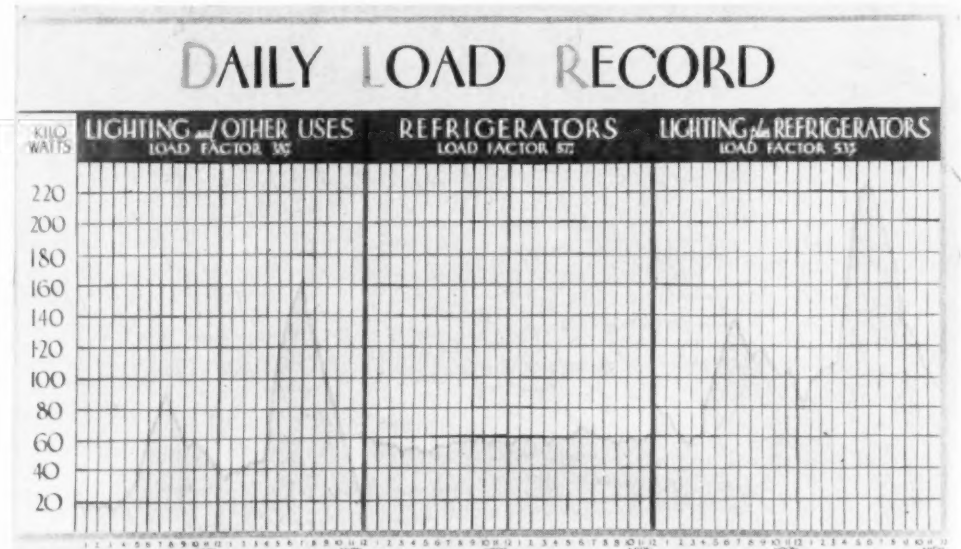
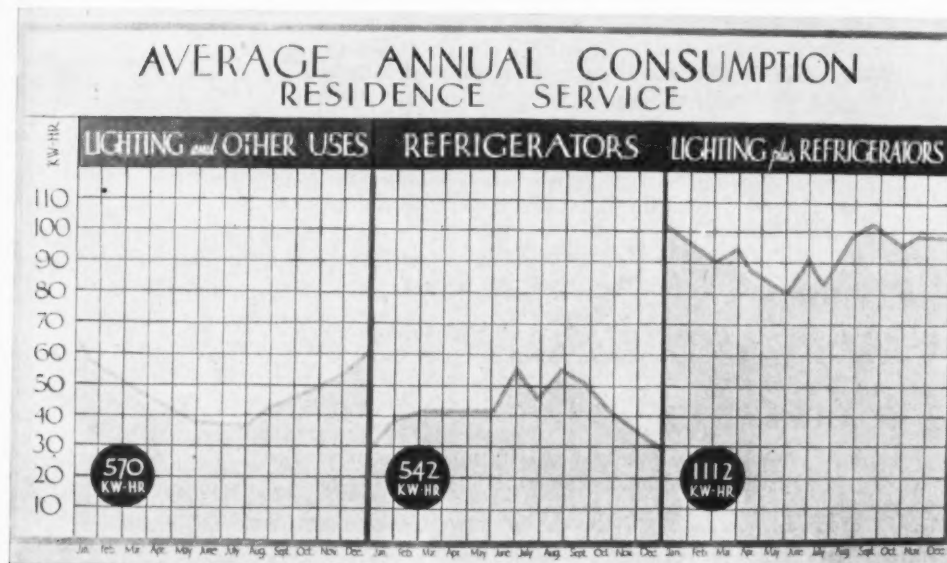
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DECATUR, ILL.	OMAHA, NEB.	SAN FRANCISCO, CALIF.
DENVER, COL.	PHILADELPHIA, PA.	YOUNGSTOWN, OHIO

## NUMBER AND LOCATION of LOCAL ELECTRIC REFRIGERATION BUREAUS

DIVISION	LOCAL BUREAUS	TOTALS CONDUCTING COOPERATIVE BUREAU ACTIVITIES
NEW ENGLAND	96	185
EASTERN	47	115
EAST CENTRAL	29	98
SOUTHEASTERN	20	72
GREAT LAKES	73	146
NORTH CENTRAL	16	48
MIDDLE WEST	33	52
PACIFIC COAST	26	94
NORTHWESTERN	29	46
ROCKY MOUNTAIN	19	104
SOUTHWESTERN	43	51
<b>TOTAL</b>	<b>431</b>	<b>1011</b>



## ELECTRIC REFRIGERATION

AND HOW IT COMPENSATES FOR DECREASE OF NEWLY WIRED HOMES

HOUSEHOLD ELECTRIC REFRIGERATORS IN U.S.	NEWLY WIRED HOMES
1931 950,000	29,000
1930 775,000	380,000
1929 630,000	896,000
1928 468,000	1,156,000
1927 385,000	1,260,000
1926 248,000	1,438,000
1925 73,000	1,398,000



# Copeland Tells Story of Household Refrigeration Development

## Pioneer Explains Barriers Facing Early Manufacturers

By James W. Beckman

DETROIT—The story of present-day refrigeration includes as an important part of its actual development the story of a man, yet under 50, who helped develop the machines now being marketed by two large refrigeration manufacturers—Kelvinator and Copeland—as well as launching both these organizations. This man is Edmund J. Copeland. Mr. Copeland claims having produced the

first refrigerating machine to operate automatically by electricity. There had been electrically operated refrigerators, and there had been refrigerators which used thermostatic control previous to his ventures, but he claims having first combined the two requisites in a practical machine.

With Arnold H. Goss, he founded the Electro-Automatic Refrigeration Corp. (predecessor of Kelvinator Corp.) in 1914, and resigned from Kelvinator Corp. in February, 1921.

In April, 1923, he organized Copeland Products, Inc., and went into the manufacture of the first Copeland refrigerators.

### Withdraws in 1926

Mr. Copeland withdrew from Copeland Products, Inc., about 1926, retaining his interest in the company for two years more.

At the present time he is virtually in retirement. He states that he made very little money out of either of the two refrigeration enterprises which he pioneered.

With a background consisting of high school and business school education, Mr. Copeland started his career as a clerk in a clothing store, then jumped to the position as secretary to the purchasing agent of the old Michigan Central Railroad Co. in the old Third Street Depot, Detroit.

### Goes With Buick

After six months, he applied for a job with W. C. Durant, at Buick, and was hired as secretary to the assistant sales manager, then as assistant purchasing agent for the Buick Motor Car Co. At that time four automobiles a day was the biggest production in the world, Mr. Copeland narrates.

When the Buick plant was moved to Flint, Mich., in December, 1906, Mr. Copeland went along, staying until 1913. During that time he had been purchasing agent for Buick, and for a year, general purchasing agent for General Motors. For a year, he was general manager of the Corcoran Lamp Co., in Cincinnati.

That was his experience when, in April, 1914, he started the refrigeration development which became Kelvinator Corp.

### Told to Get in Later

"I did this much against the wishes of W. C. Durant, who told me what a fool I was," Mr. Copeland says. "He said if there was anything in it, to

## Authorization

Detroit.  
Dec. 10, 1931.

Mr. James W. Beckman  
9235 Agnes St.  
Detroit

Dear Mr. Beckman:

I have read your manuscript of the story of the invention and development of the electric automatic refrigerator very carefully. It is an accurate presentation of the facts about the men who helped me both in the mechanical development of the machine and in the financing of the work.

This is the first time I have ever told the story of the development of the electric automatic refrigerator and you are authorized to use it in such ways as you wish.

I appreciate the great care that you have taken and the exhaustive work you have done to get every statement correct in the smallest detail.

EDMUND J. COPELAND  
910 Collingwood Ave.

Detroit.  
Feb. 19, 1932.

Mr. James W. Beckman  
9235 Agnes St.  
Detroit

Dear Mr. Beckman:

This is to certify that the electric automatic refrigeration unit shown in these pictures is the first practical electric automatic refrigerator built by me, and the first of its kind ever built.

It was completed in January, 1918, after about four years of experimental work during which time 15 or more machines were built before we succeeded in making this one, which is the first practical electric automatic refrigerator.

E. J. COPELAND.

let the other fellow spend the money and get in later.

"It was in this year that I ran into a fellow at Saginaw by the name of Nathaniel B. Wales. He was a man with a great many inventive ideas, but he was primarily an inventor and not a producer. He got me mixed up with a

## Copeland and His 'Baby'



Edmund J. Copeland, who helped develop and launch Kelvinator and Copeland, inspects his first refrigerator after it had been in service from 1918 to the present time.

combination headlight and horn, a gas-line sight gauge for measuring the amount of gasoline in an automobile tank, and a lot of other things.

"In the meantime he talked me into electric refrigeration. Arnold H. Goss was also an old General Motors man who, like myself, had been with Buick. He had been Durant's confidential man in the organization of General Motors Corp., and was a large factor in getting the various companies together.

"Mr. Goss and I formed a co-partnership in September, 1914."

### Organize Company

Mr. Goss and Mr. Copeland put up money from then until May 1, 1916. At this time, the story continues, Wales was no farther along in his electric refrigeration experiments than he had been two years before, so Mr. Copeland made the decision to give up all other activities to assume full responsibility for the new machine.

Organizing what they called the Electro-Automatic Refrigeration Corp., with \$10,000 cash paid in, they took over the Detroit plant which is now the Ainsworth Mfg. Co., renting one wing of a floor, with a floor space of 3,000 sq. ft.

"In February, 1918, progress had been made to such an extent that the first electric automatic refrigerator was sold to Joseph T. Schlacks, who had been head of the McCord Mfg. Co. of Detroit, and who was then retired," Mr. Copeland continued.

"After this machine had proved to be successful I told Mr. Schlacks that it was my first one. He smilingly remarked, 'If I had known it was the first machine, I don't believe I would have bought it.'

"I presume I had built 15 different models over a period of three years before I sold that machine.

"Finally I built a model that worked especially well. I installed this machine in my own home so that I could observe its action and test it out with full knowledge that no one was tinkering with it. This was in use until 1925, when I put a Copeland refrigerator in my home.

The machine which was sold to Mr. Schlacks is still in use, Mr. Copeland states. It is now owned by Charles H. Hodges, Sr., of the American Radiator Corp., Grosse Pointe, Mich.

### First Buyers

The second refrigerator manufactured was sold to Mr. Goss, and others went to William McAneny, president of Hudson Motor Car Co.; R. B. Jackson, at that time president of Hudson; Joseph Boyer, Jr., famous automobile racer; R. B. Ridgely, Grosse Ile; Dubois Young, president of the Hupp Motor Car Co.; Ogden Ellis of the American Boy; Edwin Denby, later secretary of war.

"The response from these people was encouraging, and I soon had 30 machines installed on 90-day approval. Every one gave satisfactory service and was paid for.

"The year following, I installed 20 machines in Toledo under the same circumstances. The machines without the box sold for from \$325 to \$550. If the people had a box in their home, we in-

ator, was arrived at in an interesting manner.

"While I was working on the development of the machine," Mr. Copeland narrates, "a man by the name of Kempfert, who was then editor of *Popular Science Monthly*, often called on me because he was interested in the development from a mechanical and editorial standpoint.

"After the machine had been developed to the point where it was a success, Kempfert got in touch with Stanley Resor of the J. Walter Thompson Co., New York advertising agency.

Resor coined the words Kelvinator, Kelvination, Kelvinating, to be used in place of refrigerator, refrigeration, refrigerating. Kelvin, himself, had done little experimentation with refrigeration, but his name was taken more or less arbitrarily because up to the time of his death in 1907, he was recognized as one of the world's foremost authorities on thermodynamics."

A line-cut of Lord Kelvin was used on the letterhead of the company, and Kempfert and Resor created a slogan to appear on the literature and stationery.

"From the time we first sold refrigerators we called them Kelvinators. When we got into production, the name of the company was changed from Electro-Automatic Refrigeration Corp. to Kelvinator Corp. That was in 1917 or 1918."

### Venture Successful

Success from the very start was shown by the fact that after the first year in Detroit, Mr. Copeland sold a refrigerator every day in the next year, counting Sundays and holidays. The first showroom was on Adams Ave., in Detroit, and was opened in 1919. Prior to that time sales had been made direct from the factory.

Contemporary attempts were being made to put electric refrigerators on the market. One of these was the Isko, on which experiments were being made by Fred W. Wolf, Jr., of Chicago.

"It was taken over by a group of men prominent in the automotive industry," Mr. Copeland recalls. "Henry B. Joy of Packard Motor Car Co., Detroit, and Carl Fisher of Prestolite Co. were among them. Wolf's father, Fred W. Wolf, Sr., was one of the most famous

(Continued on Page 10, Column 2)

## Refrigeration Cabinets



High-grade line of cabinets made by gas range manufacturer, 100 years of experience in steel fabrication, porcelain enameling processes and insulation.

Refrigerator cabinet plant at Jersey City ideally located for Eastern market.

Porcelain enamel or lacquer exteriors.

Standard 4, 5, and 6-ft. boxes.

Special sizes and designs to order.

Refrigeration and gas range combination units.

Attractively priced.

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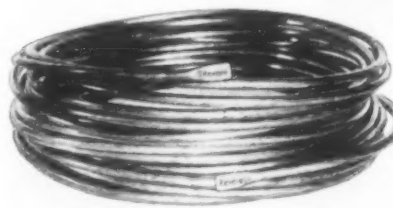
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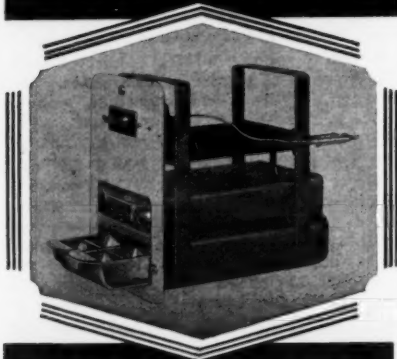
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Automatic defrosting between cycles of McCord fin tube type refrigeration cooling surface assures constant temperatures and minimum dehydration.

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Testing and experimental laboratory service for Manufacturer, Distributor, Central Station. Test data exclusive property of client.

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## Mastercraft Refrigerator Pad and Carrying Harness



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For refrigerators  
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Refrigerator  
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Insure deliveries without scratched or broken enamel. Write for prices.  
Fulton Bag & Cotton Mills

## Thermostatic Control



Mr. Copeland (right) explains the operation of the thermostatic control which he developed at a cost of \$125,000. He is showing the control to J. W. Beckman, author of this article.

## COPELAND TELLS OF EARLY DEVELOPMENTS

(Continued from Page 9, Column 5)  
refrigerating machine men, making big machines.

"After several years, Joy and Fisher left the company, and A. Y. Gowan, who had considerable money in the company, moved it back to Chicago from Detroit. The company afterwards failed and was sold at auction."

Mr. Copeland is not an engineer, he stated in describing his qualifications for building a workable unit.

"I am rated as an engineer, but all my stuff is purely practical experience. I came up through the railroad business, and with Buick I was constantly thrown in mechanical work."

"I could not sit down and design anything, but I can tell what is good and practical. I was able to see what would work and what wouldn't, so I picked out the things with merit and developed them."

### Gives Associates Credit

A number of men were given credit by Mr. Copeland as having been of assistance in the design and construction of the early Kelvinator models.

F. J. Heideman and Fred Kolbe were two of the men who worked with him early in the game; such names as Joseph N. Hadjisky, Edward R. DeLuiz, James H. Denny (who later developed the Servel refrigerator), Harry E. Thompson, are also on the list of those who assisted in the development of the machine.

### Automatic Control

"More money, more sleepless nights, were spent on the automatic control than any other one device connected with the service the machine was to perform," Mr. Copeland continued. "After all, we were selling a service. The machine was only incidental to that service."

In developing the control, he consulted Mr. Herman of the Wilson Co., Newark; men at the General Electric Co., Ft. Wayne, Ind.; the Johnston Co., Milwaukee; Minneapolis-Honeywell Co.; and the Hoskins Co. of Detroit.

### Help Hard to Get

"All of these companies and their engineering staffs were familiar with heat control. But I wanted cold control," Mr. Copeland emphasized. "I wanted control of low temperatures within a narrow range. Everyone said, 'Copeland, give us ranges from 150° and up and we are at home.'"

As a last resort, Mr. Copeland went to Knoxville, Tenn., to spend a week at the Fulton Mfg. Co.

"At the end of the week, Mr. Fulton boxed up everything we had tried, and said, 'Copeland, if there is any glory in your accomplishing what you want, take it home with you and work it out for yourself.'"

"I didn't know what to do, but I did go home, and with the aid of the men about me I got a thermostat that would function at 110 to 120 volts, quick make and break, within the desired range of temperature. I probably spent \$125,000 on this alone."

Another difficult development was that of the stuffing box seal for compressors used in retaining gas pressure, Mr. Copeland recalls. This device was developed in 1918 by Fred Kolbe, then a workman in the machine shop.

"My machine also differed from other attempts in that I worked all along on an air-cooled machine. While I was experimenting on this type I was laughed at by engineers throughout the industry.

Now, however, all household machines are air-cooled."

Mr. Copeland continued by naming some of the experiments which were made and discarded in developing the first Kelvinator.

First, an ammonia absorption machine was built, only to find that it was too costly for the home, both in first cost and ultimate operating cost. This model was also too dangerous, he believed.

"Then we started the development of the so-called SO<sub>2</sub> machine, using sulphur dioxide. The first machines drawn up looked good on paper. Parts were made, only to find they would not go together. Our \$10,000 that we started with had gone glimmering, but I was determined."

Mr. Copeland smiles as he remembers that on the first 30 machines installed in Detroit, he went out on every service call, no matter what the hour of day or night. It was on these calls, he believes, that he learned what the shortcomings of the machines were, and what the public wanted.

### Financial Aid Secured

The financial burden of Kelvinator operations was carried along by Mr. Goss and Mr. Copeland almost entirely until the early part of 1921. Then Leo, Joe, and Jean Siegel, of the American Lady Corset Co. and Siegel's women's shop in Detroit; E. P. Hammond of the Gemmer Mfg. Co.; Martin L. Pulcher, Federal Motor Truck Co.; Arthur J. Mayer of Gregory, Mayer & Thom, were men who put money into the picture.

A stock issue was put out in 1921 and 1922 which did the heavy financing for Kelvinator Corp.

Mr. Copeland's resignation from Kelvinator Corp. occurred in February, 1921.

"The business had arrived, and I couldn't get anyone to finance it, and couldn't do it myself, so I pulled out. I went to Flint in April, 1923. In the meantime I had developed the Copeland machine. Goss went ahead with the original Kelvinator Co."

He jumped ahead of the story to state that Mr. Goss perhaps did more financially to make electric refrigeration possible than any other one person. Even after Mr. Copeland was working on the Copeland machine, Mr. Goss, continued to put up money when it was needed, to carry on the new competing company.

The new machine differed in no way as far as mechanics and principle were concerned, but had minor changes to fit it for the use of iso-butane as a refrigerant.

"At that time, we were all using sulphur dioxide as the refrigerant," he says. "The sulphur was very corrosive when improperly handled. It was obnoxious if it escaped. I was looking for an inert gas."

"With the help of Harry Edwards, one of the chief engineers of the United States Carbide and Chemical Co., the new refrigerant, iso-butane, was developed."

### Started Copeland

The company, Copeland Products, Inc., was started in Flint, Mich., in April, 1923, and approximately 50 per cent of the capital was Flint capital invested by many of Mr. Copeland's friends there. In 1925, the plant was moved to Detroit, and \$225,000 was raised among Detroiters.

"In raising this money I was assisted by Charles A. Floyd of Charles A. Floyd & Co., fiscal agents of Detroit. Mr. Floyd interested Edwin H. Brown and William Robert Wilson, well-known Detroit business men."

"Through the influence of Mr. Brown (Concluded on Page 11, Column 1)

# BUYER'S GUIDE

Manufacturers Specializing in Service  
to the Refrigeration Industry

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Fit all cabinets, with or without legs, or in the crate. Capacity, 1,200 lbs. All steel frame, 4" rubber tired wheels, one truck with top casters and handles for tilting and rolling into delivery truck and on the stairs. Only pads touch cabinet. Last a lifetime. Complete set \$34.50. Ball bearing swivel casters on one end, \$5 extra.

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Handle leg cabinets only. Per set, \$31.50. Spring steel books to convert into X-70 available separately. Ball bearing swivel casters on one truck, \$5 extra.

**FINDLAY REFRIGERATOR TRUCKS**  
For leg cabinets only—padded steel frames—4" rubber tired wheels. Per set, \$18.00.

Manufacturers of Trucks for 32 Years



We can take care of your  
entire requirements of

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We are specialists in warehousing, delivering and installing all types of Domestic and Commercial Refrigerators.

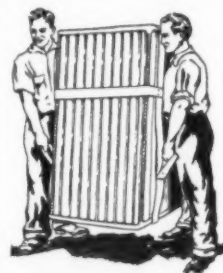
Our Warehouse is Fireproof, steam heated and protected by sprinkler system. We have our own Railroad Sidings.

Rates Are Nominal

Correspondence and Inspection Invited

**M. & L. CO.**

177 Pacific Street, Brooklyn, N. Y.  
168 E. 33rd St. New York City. 711 E. 139th St.



## Specially designed REFRIGERATOR COVER and CARRYING HARNESS

Form-fitting covers made of canvas outside—mole-skin lining inside—with thin felt filling, firmly stitched. Impossible to rip. The "E-Z" Lift web harness eliminates strained backs and delivers the heaviest refrigerator with a minimum of effort. Easy grip.

Web Harness—\$7.00 Complete  
Covers—\$8.00, \$10.00 and \$12.00

America's largest pad manufacturers

**NEW HAVEN QUILT & PAD CO.**  
80-86 Franklin St., New Haven, Conn.

## TO THE CANADIAN TRADE

You can get quicker delivery at lower cost by ordering from us

We carry in Stock

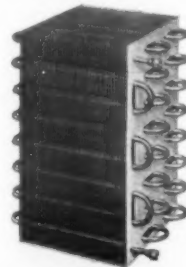
COMPRESSORS—COMPRESSOR UNITS—NON-FROSTING COMMERCIAL COILS—BOILER TYPE COILS—COPPER TUBING—FLARE AND SOLDERING FITTINGS—THERMOSTAT AND PRESSURE CONTROLS—DEHYDRATED OIL—AND MANY OTHER PARTS.

**THE ARCTIC ICE & FUEL CO., LIMITED**  
Winnipeg, Man.

## A NEW FIN COIL by PEERLESS

Wedge-Locked and Edge-Locked Aluminum Fins on Tinned Copper Tubing—Absolute Metal to Metal Contact. A Superior Coil in which Soldered Return Bends have been eliminated. Priced to meet 1932 conditions. Write—Wire for Catalog.

**PEERLESS ICE MACHINE CO., 515 W. 35th St., Chicago, Ill.**



## HOUSEHOLD ELECTRIC REFRIGERATOR SPECIFICATIONS

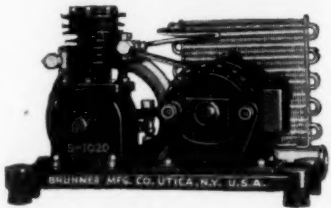
Detailed specifications for 342 models made by 49 different manufacturers are tabulated in the June 29, 1932, issue of ELECTRIC REFRIGERATION NEWS.

Send \$1.00 for 17 weeks trial subscription and specify term to start with June 29 issue. A limited number of extra copies are now available.

**Electric Refrigeration News, 550 Maccabees Bldg., Detroit**



## You're Buying 26 Years of Experience



... when you buy Brunner refrigeration units. You're getting a product that has proven itself a big business builder and a profit producer. Get the full facts. Write now for the complete Brunner story. Refrigeration Division, Brunner Mfg. Co., Utica, N. Y.

### HIGH SIDES AND COMPRESSORS by BRUNNER

### Direct Expansion Dairy Aerators

For Ammonia or Methyl Chloride

These Direct Expansion Dairy Aerators have been designed to give dairymen milk cooling apparatus in its simplest, most dependable and most efficient form.

All sizes are available in this type.

### H. C. PARKER, LTD.

Factory and General Offices

2600 Santa Fe Avenue Los Angeles, California

#### BRANCH OFFICES

437 Montgomery St., Jersey City, N. J.  
510 Larkin St., San Francisco, Calif.

734 M. & M. Bldg., Houston, Texas  
237 Roosevelt Bldg., St. Louis, Mo.  
37 W. Van Buren St., Chicago, Illinois

## COPELAND TELLS OF EARLY DEVELOPMENTS

(Concluded from Page 10, Column 3)

and Mr. Wilson, a group of citizens in Detroit and Cleveland was collected to provide the funds required to develop the new company."

Among these men were Dr. Fred T. Murphy, chairman of the board, Guardian Trust Co., Detroit; H. P. McIntosh, Sr., chairman of the board, Guardian Trust Co., Cleveland; Paul H. Deming, Detroit banker; James T. McMillan, Detroit & Cleveland Navigation Co.; Harry T. Cole, president of U. S. Radiator Corp.

#### Provided Funds

Herbert I. Lord, Detroit Lubricator Co., now part of American Radiator Corp.; Charles H. Hodges, American Radiator Corp.; H. P. McIntosh, Jr., vice president, Guardian Trust Co. of Cleveland; Henry Ladyard, lawyer and capitalist, Detroit; Frank W. Brooks, Jr., Homer Warren & Co., and George A. Ducharme of Detroit.

"Another man who deserves special mention is R. K. Horner, who was head of the Flint Spring Water Ice Co. He was a big factor and helped me raise all the money in Flint. Although ice men generally were opposed to the new idea of electric refrigeration, Horner, who was the head of an ice company himself, believed so thoroughly in the new type of refrigeration that he helped me raise the money in his own city.

"Later his father, Joseph Horner, who owns the Grand Rapids Ice Co., did more than anyone else I know to sell the ice companies on electric refrigeration.

#### Ice Men's Attitude

"Some idea of how progressive these men were may be had when we recall that in many places the ice men were openly hostile to the new type of refrigeration. In certain cities like Chicago, for instance, where the unions were strong, they put all kinds of wiring obstacles in our way. They had ordinances passed to make our jobs difficult of installation.

"We were required to employ union men instead of our own to do the wiring. We had to put in all-metal conduits—rigid ones—whereas flexible conduits were suitable in most instances.

"We had to employ licensed plumbers to install the machines instead of our own skilled and experienced men. It was a specialty calling for specially trained men as against men of general experience such as plumbers."

#### Ran Service School

Because of the special nature of the work, the firm ran a school of service and installation, bringing young men into Detroit from every dealer in the country before shipping a machine to that dealer, in order to educate someone in the firm on the handling of a machine.

"Contrary to what would ordinarily be expected, we paid those young men to go to school. Yet, we were not permitted to use these specially trained experts on the work."

Going back to the financial part of the job, Mr. Copeland said "At the time I resigned from Kelvinator in 1921 and went ahead with my new company, frankly I was broke.

"I had borrowed every nickel I had put in Copeland from my friends. Among them were Walter P. Chrysler, Clem O. Miniger of Electric Autolight Co., Toledo; R. T. Armstrong, A. G. Bishop, Spencer Bishop, H. H. Bassett, D. D. Aitken, John Pierce, Charles H. Bonbright, George W. Hubbard, Ed Lunt, Arthur M. Davison, George Hannum, J. R. Francis, Edwin W. Atwood, Frank D. Buckingham, R. K. Horner, all of Flint, Mich.; F. C. Finkenstein, Bay City, Mich.; Charles T. Bush, and William C. Rands of Detroit; J. Robinson Poste of Columbus, Ohio.

"A few of these men took stock in the company for what they loaned me. The others I paid off."

Standing in definite contrast to their attitude today was the fact that in the early stages the utility companies opposed electric refrigeration, claiming they would have to put in additional transformers and other things to meet this load.

"We couldn't get the utility companies behind the thing because it was new and they were reluctant to recommend the machine. We had innumerable cases where they felt putting the load on meant too much expense on their part in installing additional transformers.

#### Meant Equalizing Voltages

"In many cases they had fluctuating loads and in putting in electric refrigerators they had to smooth out their voltage due to handling the extra load. Flint was a town that was notorious for fluctuating voltages. Louisville, Ky., was another.

"Miss Sarah M. Sheridan, vice president and sales manager of the Detroit Edison Co., cooperated more than anybody I know in the utility field. She was then sales manager of the company. Miss Sheridan gave cooperation and assistance right from the word 'go.'"

Slowly but surely the utility opposition was broken down, however, Mr. Copeland showed.

"At the meetings of the National

#### Became More Interested

Electric Light Association, they began to have papers read about something they had never heard of before. When utility companies realized that here was a load that meant from \$20 to \$40 a year on their meters as against only \$20 they were getting from their light load, and that the poles, lines, and meters were already installed, they were more enthusiastic.

"From about 1918 to about 1925, the utility companies saw these refrigerators without taking any action encouraging their use. Two or three years later they began to merchandise electric refrigerators themselves for the purpose of increasing their electrical output."

Referring back to his description of the early opposition of ice men, Mr. Copeland said that eventually they discovered that the market was actually increased for ice. Propaganda in behalf of electric refrigeration taught the people the need of refrigeration, and thousands who had never used ice bought ice boxes and became good customers.

#### Production Problem

After the first pioneering work was done, and a demand was arising for electric refrigerators, the problem of production arose.

"At first they had been made largely by hand in a small way. Now it was necessary to get a plant and lay it out on a production basis. We had to devise machinery and train our men in quantity production methods as against the old-time methods that they had been accustomed to."

On top of everything else came the need for something new in the way of cabinets.

"The first cabinets we used when we began to make complete refrigerators instead of only refrigerating units, were the old ice boxes already in the house. When we tried to use wooden boxes in making our complete refrigerators, we found that they would not stand up with mechanical refrigeration.

"Mechanical refrigeration was too cold for them, and caused the wood to warp and pull apart. This forced upon us the fine cabinets we have today."

Mr. Copeland withdrew from the Copeland Co. about five years ago, retaining his interest in the company for two years more.

"I never made any money out of refrigeration," he says. "I operated Kelvinator for seven years as its president

and general manager without any salary. I never took any salary, and neither Mr. Goss nor myself had any promotion stock. The only stock we had was what we actually paid for.

"All patents were taken out in the name of the Electro-Automatic Refrigeration Corp., and they had been assigned to Kelvinator Corp."

Mr. Copeland stated that "the fellow who pioneers a thing usually gets nowhere and nothing out of it," and says that he spent 90 per cent of his time raising the money and the other 10 per cent running the business.

## REQUESTS FOR INFORMATION

Please refer to the 1932 Refrigeration Directory and Market Data Book for a complete list of all manufacturers of refrigeration equipment, parts, materials, supplies and accessories; also for all available statistical data on sales of refrigeration equipment, distribution methods, etc.

To obtain a copy of this book send \$2.00 to Business News Pub. Co., 550 Maccabees Bldg., Detroit, Mich.

Advertisers will be given preference in published answers to requests for buyer's guide service, but a complete list of all known suppliers will be mailed if stamped, self-addressed envelope is enclosed with inquiry.

Readers who can be of assistance in furnishing correct answers to inquiries, or who can supply additional information, are invited to address Electric Refrigeration News, mentioning query number.

#### Service Manual

Query No. 847—"Some time ago you carried an advertisement of a handbook on refrigeration installing and maintaining. May we have the name of this?"

Answer—"We believe you refer to 'The Official Refrigeration Service Manual,' published by Gernsback Publications, Inc., 98 E. Park Place, New York City.

#### Silica Gel

Query No. 849—"Can you tell us anything about Silica Gel? Where can we get it? Who manufactures it? Just what is it? What is its efficiency per pound? How does it refrigerate? Any information you can give us on this subject will be highly appreciated."

Answer—"In order that you may have complete information about Silica Gel we have forwarded a copy of your letter to the Silica Gel Corp., Baltimore Trust Bldg., Baltimore.

#### Gas and Oil Refrigerators

Query No. 850—"Would like to get information concerning gas and oil refrigeration."

Answer—"We suggest you get in touch with: Electrolux Refrigerator Sales, Inc., Evansville, Ind. (gas); Faraday Refrigerator Corp., Third National Bldg., Dayton (gas); Perfection Stove Co., 7609 Platt Ave., Cleveland (oil); Crosley Radio Corp., Arlington St., Cincinnati (ammonia absorption type actuated by hot water); Montgomery Ward & Co., Chicago (oil).

#### SO<sub>2</sub> Suppliers

Query No. 851—"Will you please advise us of the nearest point from which we can obtain SO<sub>2</sub>." (Tennessee firm.)

Answer—"A complete list of suppliers of sulphur dioxide appears on page 286 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

#### Refrigeration Schools

Query No. 852—"The writer will appreciate your sending him the names and addresses of schools for teaching electrical refrigeration service and repair, particularly schools located in Chicago or cities east as far as New York. If there are correspondence schools teaching these courses, would also like their names and addresses."

Answer—"Four refrigeration correspondence schools and 11 refrigeration training schools are listed on page 355 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

#### 1932 Sales Figures

Query No. 853—"Can you give us the total number of household electric refrigerators which have been sold to date this year? If you cannot give us the specific figures could you give us the percentage increase, if any, for say the first five months in this year over the same period last year?"

Answer—"All available statistical information for 1932 has been published in ELECTRIC REFRIGERATION NEWS this year. A full page of such data appeared on page 12 of the May 4 issue; curves showing the comparison between sales of automobiles and refrigerators appeared on page 1 of the June 8 issue. Other statistics may be found in the June 1, and June 8 issues, as well as on page 4 of this issue. Monthly statistics are not yet collected from any companies except those holding membership in the N.E.M.A.

#### Technical Information

Query No. 854—"I wish to purchase some books or manuals containing technical information on automatically refrigerated equipment for commercial and household uses, as well as the latest

information on air conditioning equipment for the home." (Italian engineer.)

Answer—"We refer you to the new Refrigerating Data Book, published by the American Society of Refrigerating Engineers, 37 West 39th St., New York City. ELECTRIC REFRIGERATION NEWS reports all news on air conditioning equipment for the home.

#### Ice Cream Cabinets

Query No. 855—"Would like to know of manufacturers of ice cream freezing equipment, brine tanks, and hardening cabinets. Have in mind purchasing separate units and assembling them for resale."

Answer—"Information on manufacturers of equipment for ice cream manufacture and distribution may be found on pages 254-257 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

#### Ice Cream Freezers

Query No. 856—"We have a customer who is interested in an electric ice cream freezer and refrigerator combined. If you know of any concern which handles a machine of this kind, would appreciate your advising us."

Answer—"Suggest you write Taylor Freezer Corp., Beloit, Wis. For other manufacturers see answer to Query 855.

## LITERATURE OF MANUFACTURERS

Catalogues, bulletins and other materials recently issued.

Manufacturers are requested to send copies of new trade literature to Electric Refrigeration News.

#### Electrochef Ranges

"A whole new kitchen—one new range," is the keynote of a new Electrochef folder which is being mailed out by Detroit Edison Co. The folder emphasizes the beauty of the range and the cleanliness in cooking as factors which change the entire appearance of a kitchen.

Eight features of the Electrochef are enumerated down one side of the folder: cleanliness; easy to clean; retains flavor in foods; retains food values because little water is needed in cooking; never heats the kitchen; beauty of design; full automatic operation; a model to fit every kitchen.

Attached is a business reply card on which the prospect may ask for additional information. A short paragraph on a budget payment plan is included.

## COPELAND GIVEN AS PRIZE AT KIWANIS CONVENTION

DETROIT—As a special feature of the Kiwanis 17th national convention here, June 26 to 29, a Pirate's Night was held at Bob-lo, well known excursion point along the Detroit and Canada waterways.

Approximately 7,000 Kiwanis from every section of the United States attended, and Kiwanis Club No. 1, of Detroit, the first Kiwanis club to be formed, conducted the pilgrimage for pirate's buried treasure.

First prize was a Copeland electric refrigerator.

## THE CONDENSER

PAYMENT IN ADVANCE is required for advertising in this column. The following rates apply:

POSITIONS WANTED—Fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. ALL OTHER CLASSIFICATIONS—Fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccabees Building, Detroit, Mich.

#### POSITIONS AVAILABLE

SALESMAN WANTED by a well rated and nationally known manufacturer of a complete line of automatic Heat Control Devices. Must have a successful record of producing volume business on an item to retail at \$50.00. 97% of the homes are prospects. To real salesman we offer a complete sales merchandising plan, including deferred payments, and an opportunity to make large profits and establish himself permanently in a growing industry with unlimited possibilities. If you can qualify, write full details in first letter. Box 480.

SALESMEN desired for handling V-type Rubber Compressor Belts to replacement parts dealers and refrigerator agencies. A very profitable side line. Box 482.

#### POSITIONS WANTED

MANUFACTURERS of electric refrigerators and parts wishing to develop their foreign business should communicate with advertiser. Twenty years' experience as representative and salesman abroad. Has just returned from trip around South America where he has successfully established distribution of refrigerator line. Has extensive connections in most parts of the world. Box 481.

#### EQUIPMENT FOR SALE

FRIGIDAIRE equipment, 88 F coils, \$30.00. 5 TF coils, \$15.00. Model C one H. P., Model N 1/2 H. P. compressors. Write me what you need, shipped inspection allowed. Will buy used Frigidaire equipment and parts any condition. Automatic Refrigeration Service Co., 308 Tenth N. W., Washington, D. C.

FOR SALE—Several hundred high-class electric cabinets suitable for multiple installation to "close out" at a real bargain. Belding Hall Co., Belding, Michigan.

## Engineering Consultant Available

Consulting, research, development, sales engineering, production, design, 25 years' experience. Have taken out numerous patents on refrigeration. Have designed, put into production, taken out patents on many of machines now in present use. No job too large or too small. Very best of references furnished.

Frank W. Andrews  
Research Division, Island View, O.

## Trained Men Available

When in need of practical, trained shop mechanics, sales, installation or service men, patronize this FREE Placement Bureau. We have competent, trained graduates available in every locality, to meet your requirements. With or without experience. No charge to the men or to you. Write, phone or wire.

#### Utilities Engineering Institute

Placement Division  
Dept. 472 404 No. Wells St., Chicago

## Subscribe Now and Save Money

### Special Offers

Note—Combination rates are for United States only.

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Electric Refrigeration News 1 Year  
Directory and Market Data Book  
Combination Price \$4.00. Saves You \$1.00

#### COMBINATION OFFER NO. 2

Electric Refrigeration News 2 Years  
and  
Directory and Market Data Book  
Combination Price \$6.00. Saves You \$2.00

#### COMBINATION OFFER NO. 3

Refrigerated Food News 1 Year  
and  
Directory and Market Data Book  
Combination Price \$2.00. Saves You \$1.00

#### COMBINATION OFFER NO. 4

Refrigerated Food News 1 Year  
and  
Electric Refrigeration News 1 Year  
Combination Price \$3.50. Saves You \$.50

#### COMBINATION OFFER NO. 5

Directory and Market Data Book  
and  
Electric Refrigeration News 1 Year  
and  
Refrigerated Food News 1 Year  
Combination Price \$4.50. Saves You \$1.50

#### COMBINATION OFFER NO. 6

Directory and Market Data Book  
and  
Electric Refrigeration News 17 Weeks  
Combination Price \$2.00. Saves You \$1.00

### Group and Foreign Rates

UNITED STATES and Possessions and Pan-American Postal Union Countries.

	Electric Refrigeration News	Refrigerated Food News	Both News Papers
1 subscription	\$3.00	\$1.00	\$3.50
5 or more, each	2.75	.95	3.25
10 or more, each	2.50	.90	3.00
20 or more, each	2.25	.85	2.75
50 or more, each	2.00	.80	2.50

CANADA (Prices include tariff charge of 5c a copy)

1 subscription	\$6.00	\$2.00	\$7.00
5 or more, each	5.75	1.95	6.75
10 or more, each	5.50	1.90	6.50
20 or more, each	5.25	1.85	6.25
50 or more, each	5.00	1.80	6.00

#### ALL OTHER COUNTRIES

1 subscription	\$4.00	\$1.50	\$5.00
5 or more, each	3.75	1.45	4.75
10 or more, each	3.50	1.40	4.50
20 or more, each	3.25	1.35	4.25
50 or more, each	3.00	1.30	4.00

1932 REFRIGERATION DIRECTORY AND MARKET DATA BOOK

In United States, \$2.00 a copy, postpaid. In all other countries, \$3.50, postpaid.

BUSINESS NEWS PUBLISHING CO., 550 Maccabees Bldg., Detroit, Mich.

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☐ Please enter my order for COMBINATION OFFER NO. .... at \$.....  
☐ Enter subscription to Electric Refrigeration News ☐ 1 Yr. \$3.00. ☐ 2 Yrs. \$5.00.  
☐ Enter subscription to Refrigerated Food News ☐ 1 Yr. \$1.00. ☐ 2 Yrs. \$1.50.  
☐ Send 1932 Refrigeration Directory and Market Data Book. \$2.00 per copy.

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